13.0
Special Natural Areas

Department of Defense (DoD) installations nationwide contain some of America's most precious natural resources. As steward of these resources, DoD is responsible not only for assuring for their conservation, but also for providing the public opportunities for appropriate educational and recreational use, consistent with military mission.

One of the ways DoD installations protect significant natural resource areas is to designate them as "Special Natural Areas." Under DoD and Department of the Army (DA) policies (Section 13.1) such Special Natural Area designations can include refuges, scenic areas and watchable wildlife areas. Setting aside special installation areas under such a designation allows an installation to focus its management actions on conservation and make resource access/use decisions accordingly.

Fort Belvoir possesses a variety of ecologically significant natural resource areas. These include extensive wetlands, extensive riparian forest buffers and important native wildlife habitats, such as habitats for the federal- and state-listed bald eagle, the state-listed wood turtle and peregrine falcon, anadromous fish species, Partners in Flight (PIF) high priority bird species (Section 11.2.2), and several state-rare plant and animal species (Section 12.2.4). Fort Belvoir also has several state-rare plant communities, a regionally rare watershed and locally important wildlife migratory corridors. These on-post resource areas factor into biodiversity conservation efforts at the local, regional and national levels. The importance of conserving these on-post resources is underscored by the increasing urbanization locally, and throughout the Chesapeake Bay region.

Fort Belvoir has three designated Special Natural Areas. These designated areas include many, but not all, of the ecologically significant natural resource areas on post (Section 13.2.1). In 1979, Fort Belvoir established the Accotink Bay Wildlife Refuge (ABWR) to protect sensitive wetlands and wildlife habitats associated with Accotink Bay, and to provide opportunities for environmental education and low-intensity recreation. In 1988, Fort Belvoir established a second refuge, the Jackson Miles Abbott Wetland Refuge (JMAWR), to protect another sensitive wetland area and to provide opportunities for bird watching. In 1993 Fort Belvoir established the Fort Belvoir Forest and Wildlife Corridor to protect forested wildlife habitat and to preserve an important wildlife migratory corridor through the installation.

Fort Belvoir manages these three Special Natural Areas with the primary emphasis on conservation. Access to and use of these areas for environmental education, scientific research and study, low-intensity recreation and low-intensity military training and testing is allowed as long as the access and use are compatible with resource conservation.

The installation's refuges serve as the foundation of the installation's natural resources education program. Where compatible with resource conservation, the refuges are made available for use as outdoor classrooms for educational programs run by off-post organizations (e.g., field trips by local high school and university classes) as well as for installation-run programs. In 2000, Fort Belvoir opened the ABWR Environmental Education Center to provide limited indoor classroom

space to support the refuge-based educational programs. Given the installation's location within the populous Washington D.C. metropolitan area, Fort Belvoir's refuges and associated education programs are potentially accessible to a very large population base.

13.1 SPECIAL NATURAL AREAS POLICIES

13.1.1 Federal Special Natural Areas Policy

Two major federal regulations relate to special natural areas management on Fort Belvoir. The Program for Conservation and Rehabilitation of Natural Resources on Military Installations (16 U.S.C.§670a. Section (a)(3)) requires installations to implement a program to provide for "the sustainable multipurpose use of the resources, which shall include hunting, fishing, trapping, and nonconsumptive uses" and to provide "public access to military installations to facilitate the use."

Natural Resources Management Program (32 Code of Federal Regulations 190) provides in §190.4(a) that "the Department of Defense shall act responsibly in the public interest in managing its lands and natural resources. There shall be a conscious and active concern for the inherent value of natural resources in all DoD plans, actions, and programs." Also, "DoD lands shall be available to the public and DoD employees for enjoyment and use of natural resources, except when a specific determination has been made that a military mission prevents such access for safety or security reasons or that the natural resources will not support such usage." §190.4 (g)

13.1.2 State Special Natural Area Policy

Virginia has no overarching special natural area policy that affects the management of Fort Belvoir's refuge and forest and wildlife corridor.

13.1.3 Department of Defense Special Natural Area Policy

DoD's natural resources management policy is contained within DoDI 4715.3, *Environmental Conservation Program*. This instruction requires installations to follow an ecosystem-based approach to natural resources management, to inventory and protect important biological resources, and to promote biodiversity. DoDI 4715.3 acknowledges the need to set aside for conservation installation areas having significant natural resources. The instruction also acknowledges the need to provide the public with opportunities to access these resources for education, scientific research and study, and recreation, consistent with ecosystem management goals. Key excerpts from DoDI 4715.3 are as follows:

Excerpts from DoDI 4715.3
Select Provisions Applicable to Special Natural Resource Areas

- Portions of installation real property that have significant ecological, cultural, scenic, recreational, or educational value may be set aside for conservation of those resources, where such conservation is consistent with the military mission. (F1j)

- Areas on DoD installations that contain natural resources that warrant special conservation efforts, after appropriate study and coordination, may be designated as special natural areas. The integrated natural resources management plan for the installation shall address special management provisions necessary for the protection of each area. Special natural areas include botanical areas, ecological reserve areas, geological areas, natural resources areas, riparian areas, scenic areas, zoological areas, "watchable wildlife" areas, and traditional cultural places having officially recognized special qualities or attributes. (F2e)

- All DoD conservation programs shall work to guarantee continued access to our land, air, and water resources for realistic military training and testing while ensuring that the natural and cultural resources entrusted to DoD care are sustained in a healthy condition for scientific research, education, and other compatible uses by future generations. (D1a)

- The principal purpose of DoD lands and waters is to support mission-related activities. Those lands and waters shall be made available to the public for educational or recreational use of natural and cultural resources when such access is compatible with military mission activities, ecosystem sustainability, and with other considerations such as security, safety, and fiscal soundness. Opportunities for such access shall be equitably and impartially allocated. INRMPs and ICRMPs [Integrated Cultural Resources Management Plans] shall describe areas appropriate for public access. (D1d)

- Natural resources under the stewardship and control of the Department of Defense shall be managed to support and be consistent with the military mission, while protecting and enhancing those resources for multiple use, sustainable yield, and biological integrity. Land use practices and decisions shall be based on scientifically sound conservation procedures and techniques, and use scientific methods and an ecosystem approach. (D2a)

- Biologically or geographically significant or sensitive natural resources (e.g., wetlands, forests, floodplains, watersheds, estuaries, riparian areas, coastal barrier islands, marine sanctuaries, critical habitats, animal migration corridors) or species (e.g., threatened or endangered species, certain marine mammals, and migratory birds) shall be inventoried and managed to protect these resources, and to promote biodiversity, using the goals identified in paragraph F1a. (D2c)

- Management measures for the removal or control of exotic species shall be included in installation INRMP's when applicable. (D2h)

- Consistent with ecosystem-based management, altered or degraded landscapes and associated habitats shall be restored and rehabilitated whenever practical. (D2l)

Excerpts from DoDI 4715.3
Select Provisions Applicable to Special Natural Resource Areas

(continued)

- Fire is an integral element of natural processes. All DoD Components shall manage fire in a manner to preserve health and safety, protect facilities, and facilitate the health and maintenance of natural systems. (D2n)
- DoD installations may engage in public awareness and outreach programs to educate the public regarding the resources on military lands and DoD efforts to conserve those resources. (D1i)

13.1.4 Department of the Army Special Natural Area Policy

DA's natural resources management policy is contained within AR 200-3, *Natural Resources—Land, Forest and Wildlife Management*. This regulation establishes the Army's requirements for managing and using land and water resources in accordance with the principles of ecosystem management, and institutes the Army's commitment to conserve, protect, and sustain biological diversity, and to restore degraded ecosystems. AR 200-3 acknowledges the need to set aside for conservation installation areas having significant natural resources, and the necessity of providing the public with opportunities to access these resources for education, scientific research and study, and recreation, consistent with ecosystem management goals. Key excerpts from Army policy, AR 200-3, *Natural Resources—Land, Forest and Wildlife Management* are as follows:

Excerpts from AR 200-3
Select Provisions Applicable to Special Natural Resource Areas

- The natural resources management professional will be an active participant in all planning and decision making activities regarding uses of the land to ensure that current and planned mission activities (for example, master planning, construction requests, site approval requests, and training exercise plans) are conducted in a manner which is compatible with natural resources and other environmental requirements. (3-2b)
- Areas that contain natural resources that warrant special conservation efforts will be identified during the inventory and classification process. After appropriate study and coordination, such areas may be managed as "Special Interest Areas" for their unique features. The integrated natural resources management plan will address the special management necessary for the area and all current and future land uses will consider the uniqueness of the area and plan accordingly to ensure conservation of the resources, and the protection and enhancement of threatened and endangered species habitats. (2-11c)
- The Army will maintain a Natural Resources R&D program as part of the R&D effort in support of military installations. This program will be funded primarily with R&D funds and may be supplemented by O&M and reimbursable funds. (2-25a)
- Whenever practicable, Army lands with suitable natural resources will be managed to allow for outdoor recreational opportunities. (7-1a)

13.1.5 Fort Belvoir Special Natural Area Policy

Fort Belvoir Supplement 1 to AR 200-3 specifies requirements for natural resources management, including management of installation refuges used for outdoor recreation. Excerpts from the Fort Belvoir Supplement to AR 200-3 relevant to special natural areas are presented below.

Excerpts from Fort Belvoir Supplement 1 to AR 200-3
Select Provisions Applicable to Special Natural Resource Areas

- Develop and implement comprehensive management plans, maintain and manage day-to-day activities at the Accotink Bay Wildlife Refuge (ABWR) and the Jackson Miles Abbott Wetland Refuge (JMAWR). (6-1g5)
- Develop and implement a comprehensive management plan for the Fort Belvoir Forest and Wildlife Corridor. (6-1g6)
- Fishing is authorized from dusk to dawn in accordance with applicable Commonwealth of Virginia regulations, except in access-controlled waters, such as training areas and wildlife refuges. (6-2i2)
- Any proposed outdoor recreation use of installation refuges (ABWR or JMAWR) must be coordinated with, and approved by the DIS [Directorate of Installation Support]. No outdoor recreational activities which are likely to have a detrimental effect on natural resources shall be permitted to occur in the refuges… (7-1e)
- No watercraft shall be or launched or landed within the wildlife refuges, unless otherwise approved by DIS. (8-1i)

13.1.6 Chesapeake Bay Program

DoD is a signatory partner of the Chesapeake Bay Program, through which federal partners, including Fort Belvoir, strive to restore and protect the Bay while promoting public awareness. The 1987 *Chesapeake Bay Agreement*, the 1990 *Cooperative Agreement Between DoD and EPA Concerning Chesapeake Bay Activities*, the 1993 *DoD/EPA Action Items for the Chesapeake Bay Program*, the 1994 *Agreement of Federal Agencies on Ecosystem Management in the Chesapeake Bay*, the 1998 *Federal Agencies' Chesapeake Ecosystem Unified Plan (FACEUP)*, and the renewed Chesapeake Bay agreement, *Chesapeake 2000,* contain goals, objectives, and commitments designed to provide for the restoration and protection of the Bay's living resources and their habitats. Specifically, the 1998 FACEUP includes commitments relating to smart growth. These commitments include discouraging development in "greenfield" sites and increasing public access to the Chesapeake Bay and its resources.

13.1.7 Partners in Flight Program

DoD is a partner in promoting and supporting the Partners in Flight (PIF) Program. The PIF Program strives to address the problems facing neotropical migratory birds through

communication, cooperation, and conservation efforts. As part of the PIF Program, DoD installations are encouraged to incorporate elements of the PIF Bird Conservation Strategy into their INRMPs. Such elements include identifying species and habitats most in need of conservation; establishing population and habitat conservation objectives; creating a Bird Conservation Plan to meet established objectives; implementing the plan; and monitoring progress.

13.2 SPECIAL NATURAL AREAS BASELINE CONDITIONS

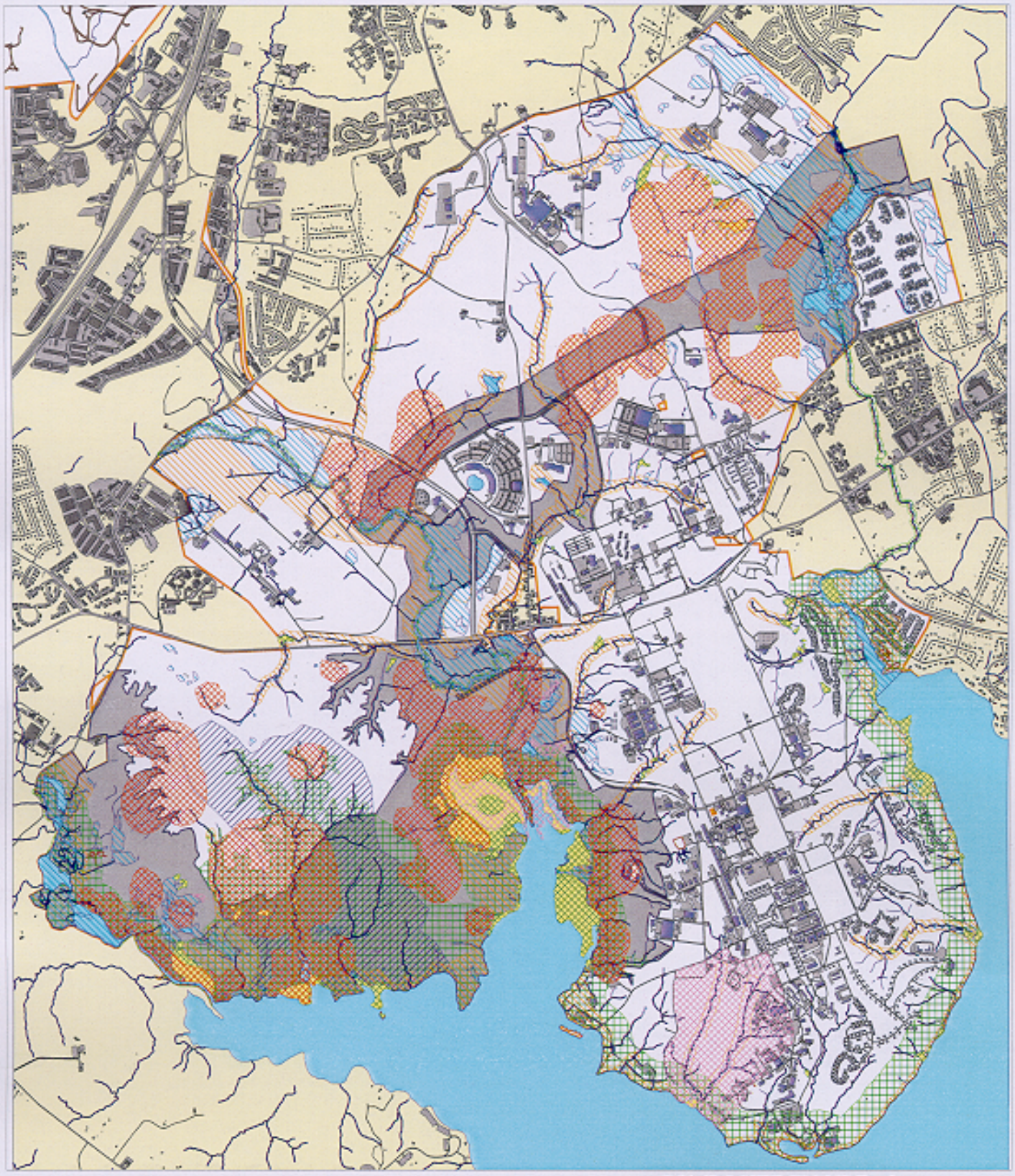
13.2.1 Designated Special Natural Areas

As of 2000, Fort Belvoir has designated three Special Natural Areas: two refuges (ABWR and JMAWR) and the Fort Belvoir Forest and Wildlife Corridor (Figure 4.1). As indicated in Figure 13.1, as of 2000 the boundaries of these Special Natural Areas encompass many, but not all, of the ecologically significant natural resource areas on post.

The two refuges and the corridor are included in the Fort Belvoir Real Property Master Plan (Woolpert, 1993a), where they are designated as "environmentally constrained" land uses and "permanently preserved and therefore unavailable for development." The Master Plan, including these refuge and corridor designations, was documented in the National Environmental Policy Act (NEPA) *Environmental Assessment (EA) for the Long Range Component of the Real Property Master Plan* (Woolpert, 1993b).

13.2.2 Ecologically Significant Natural Resource Areas

Information on the natural resources of Fort Belvoir has been obtained through various planning level surveys and studies (Sections 7 through 12). As documented through these surveys and studies, Fort Belvoir possesses significant natural resource areas that are important to biodiversity conservation at the local, regional and national levels. The most ecologically significant of these on-post natural resource areas are presented in Table 13.1. Each of these resources has been assigned a high conservation priority through federal or state statute or regulation, DoD or DA policy (e.g., DoDI 4715.3), DoD-partnered programs (e.g., Chesapeake Bay Program, PIF Program), state natural heritage program, or through recognized importance to regional ecosystem function (e.g., wildlife migratory routes).



(SEE FIGURES 4.2, 7.2, 8.1, 8.2, 11.1, 11.2, 12.1, 12.2, 12.3, and 12.4 for INDIVIDUAL MAPS of these RESOURCES)

COMPOSITE FIGURE of
ECOLOGICALLY SIGNIFICANT
NATURAL RESOURCE AREAS
on FORT BELVOIR

SOURCE: FORT BELVOIR GIS CENTER, 2000; ENRD STAFF, 2000

FIGURE: 13.1

Table 13.1: Ecologically Significant Natural Resource Areas on Fort Belvoir			
	Accotink Bay Wildlife Refuge	***Jackson Miles Abbott Wetland Refuge***	***Fort Belvoir Forest and Wildlife Corridor***
Wetlands (Figure 8.1)	X	X	X
Riparian forest buffers, and designated riparian resource protection areas (RPAs) (Figure 4.2)	X	X	X
Recognized significant habitat for the federal-listed threatened / state-listed endangered bald eagle (Figure 12.1)	X		
Habitat for the state-listed threatened wood turtle (Figure 12.1)	X	X	X
Habitats for state-rare plant species and/or globally rare and state-rare animal species (Figure 12.3)	X	X	
State-rare plant communities (Figure 12.2)	X		
Habitats for PIF priority bird species (Figure 11.1)	X	X	X
Waterways that provide passage and spawning habitats for anadromous/migratory fish, including river herring (Figure 11.2)	X		X
Contiguous forest that provides migratory corridor(s) for wildlife (Figure 11.2)	X	X	X
A rare, intact example of an undisturbed watershed within the Mid-Atlantic region (subwatershed 48) (Figure 7.2)	X		

Figure 13.1 presents a composite map of the approximate locations of these ecologically significant installation areas. As depicted in this figure, much but not all of these ecologically significant areas are contained within the three designated Special Natural Areas (i.e., the two refuges and the corridor).

13.2.2.1 Accotink Bay Wildlife Refuge

History

The ABWR was established in 1979 to protect areas of recognized ecological significance, most notably the freshwater tidal marsh and climax hardwood forest adjacent to Accotink Bay. The

refuge was also intended to provide the public with opportunities for environmental education and for low-intensity outdoor recreation. The refuge initially encompassed a 460-acre area along Accotink Bay in the south-central part of the installation. Through a series of subsequent expansions, the ABWR was enlarged to encompass the entire shoreline/slope area around Accotink and Pohick Bays, the entire riparian area along Accotink Creek south of U.S. Route 1, part of the Pohick Creek riparian area, and portions of the upland plateau of the South Post training area. The expansions were undertaken, as military mission changes allowed, to incorporate more of the recognized sensitive natural resources into the refuge. In 1999 training area T-10 was approved by Command for incorporation into the refuge to include the bald eagle "active nest protection area" within the refuge (Section 12.3.1). As of 2000, the ABWR encompasses 1,360 acres in the southwest part of the installation.

The ABWR includes all of the tidal marsh wetlands associated with Accotink and Pohick Bays. Several rare plant and animal species, and rare plant communities occur in these wetlands. The refuge does not include two adjacent, ecologically significant wetland areas (Figure 8.1): the coastal plain/piedmont acidic seepage swamp in training areas T-9 and T-7, containing several rare plant communities, and several rare plant and animal species (Figure 12.2 and 12.3). The refuge includes the lower part of subwatershed 48 (Figure 7.2, Section 7.2.1), which is considered to be a rare example of an undisturbed Mid-Atlantic upper Coastal Plain stream. The refuge includes the lower parts of the riparian protection areas associated with lower Accotink Creek, Accotink Bay, lower Pohick Creek and Pohick Bay (Figure 4.2), and borders the lower part of Accotink Creek, a major waterway used by migratory fish (Section 7.2.1). The refuge includes most of Fort Belvoir's designated bald eagle management areas along Accotink and Pohick bays (Figure 12.4, Section 12.3.1); however, part of the "high-use foraging protection area" and all of the "historic nest site protection area" are outside the refuge boundaries, extending into T-9, T-7 and T-6. The refuge includes all peregrine falcon foraging habitat (Figure 12.1, Section 12.2.2), much but not all of the on-post wood turtle habitat (Figure 12.1, Section 12.2.3) and most of the PIF priority bird species habitat (Figure 11.1, Section 11.2.2) in the southwestern part of the installation.

Training areas T-6 and T-7, which include ecologically significant natural resources, were part of an area proposed for inclusion into the refuge during the 1989 refuge expansion. Military training requirements at that time however precluded incorporation of T-6 and T-7 into the refuge. Instead, the commander approved adding T-6 and T-7 to the refuge on a delayed basis, documenting that these two areas would be added to the refuge after the Advanced Individual Training departed from Fort Belvoir, which was projected to occur in the mid-1990s. However, the addition of T-6 and T-7 to the refuge was not made, and these two areas have remained designated as training areas. Training area T-9, which also includes several ecologically significant natural resources, has not been previously proposed for inclusion into the refuge.

As of 2000, the military training and testing use of the South Post training areas, including T-6, T-7, and T-9, is minimal, involving mostly small unit maneuvers and bivouac training. These areas are typically not disrupted by present-day training activities. Consequently, the significant natural resources in these areas remain intact and contiguous with the ABWR.

Use

The ABWR has been open to the public since it was established. The primary management emphasis has been on resource conservation. Consequently, public access to and use of refuge resources have been limited to low-intensity activities, all of which must be approved in advance by DIS ENRD. Activities with the potential to disrupt natural resources, such as bike/off-road vehicle (ORV) use and horseback riding, are prohibited. Boat launches and landings are prohibited. No land disturbing activities are allowed. Except for hunting and fishing, no other active recreation activities (e.g., camping, picnicking, campfires/cookouts, etc.) are permitted. Organized large-group events require special permission from DIS ENRD because of their potential impact to sensitive resources. DIS ENRD may grant approval for such events on a case-by-case basis only after ENRD determines that such events will not impact refuge resources. No facilities construction, other than for appropriate public access and educational facilities, is allowed.

Fort Belvoir initiated a refuge use survey of the ABWR in 1998. The survey, which made use of comment cards, interviews, trail use counters, and education center attendance, was designed to assess user volume, user activities, and user perception of refuge resources. The survey was intended to be a multi-year effort. The results from the first survey indicate that between July 1998 and September 1999 more than 800 individuals used the ABWR. During the second survey year, surveys showed 1,893 people used the refuge.[1] The primary reason visitors came to the refuge during both survey years was for the quiet enjoyment of nature, trails, and wildlife.

Facilities

Existing refuge facilities are limited to a hiking trail network and associated public access and educational features sufficient to support low-intensity use (Figure 13.2). As of 2000, the ABWR trail network is approximately 9 miles in length and has a natural surface, except for the 0.5-mile paved Pohick Loop Trail, which is accessible to persons with disabilities. There are several wildlife observation structures along the trails, parking facilities at three trailheads (main entrance, Pohick Loop Trail and Basin Trail) and restrooms (compost toilet facilities) at the main entrance on Pohick Road. Information kiosks and interpretive signs are located along major trails. (Fort Belvoir maintains a current ABWR trail pamphlet including use restrictions, and provides copies of the pamphlet, along with the Fort Belvoir bird checklist, at the major trailheads.) The Accotink Bay Wetland Refuge boundary and facilities have been incorporated into the installation GIS.

In 2000, the ABWR Environmental Education Center was opened to provide a focal point for the public visiting the refuge. The center is open seasonally and provides information regarding refuge hours and use, as well as natural resource exhibits, brochures, videos, and computer programs. Interpretive programs are offered regularly. In addition, organized school, civic, and professional groups may reserve dates for special interpretive talks or outdoor classroom activities.

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[1] Actual users are expected to be higher than this record

13.2.2.2 Jackson Miles Abbott Wetland Refuge

History

The JMAWR was established in 1988 to protect an area of sensitive wetlands along Dogue Creek. This refuge was also intended to provide public access to an important bird watching area. The refuge has not been expanded since it was established. As of 2000, JMAWR encompasses 146 acres along Dogue Creek in the northeastern part of the installation (Figure 4.1).

The JMAWR includes a beaver-impounded section of Dogue Creek, which supports several state-rare animal species, and the 1.5-acre man-made Mulligan Pond. Additional forested wetlands continue beyond the refuge boundary into training area T-16 and into the Humphries Engineer Center (HEC) (Figure 8.1, Section 8.2.1). These exterior wetland areas include a state-rare plant community (Figure 12.2). The JMAWR includes all of the resource protection areas along Dogue Creek main stem (in the North Post) but does not include the resource protection areas along two major drainages through T-16 and HEC, or the resource protection areas along the lower Dogue Creek in South Post (Figure 4.2, Section 7.1.2). The refuge includes some of the on-post wood turtle habitat (Figure 12.1, Section 12.2.3) and PIF priority bird species habitat (Figure 11.1, Section 11.2.2) in the northeastern part of the installation. Large tracts of wood turtle habitat and PIF priority bird species habitats occur outside the refuge, in T-16 and lower HEC.

As of 2000, T-16 and the lower part of HEC are undeveloped, and T-16 supports limited, low-intensity military training and testing activities. These areas are typically not disrupted by present-day training or other mission activities. Consequently the significant natural resources in these areas remain intact and contiguous with the refuge.

Use

The JMAWR has been open to the public since it was established. Use management is the same as for the ABWR. JMAWR surveys indicated that the primary use is for nature walking, dog walking, fishing, bird watching, and wildlife observation.

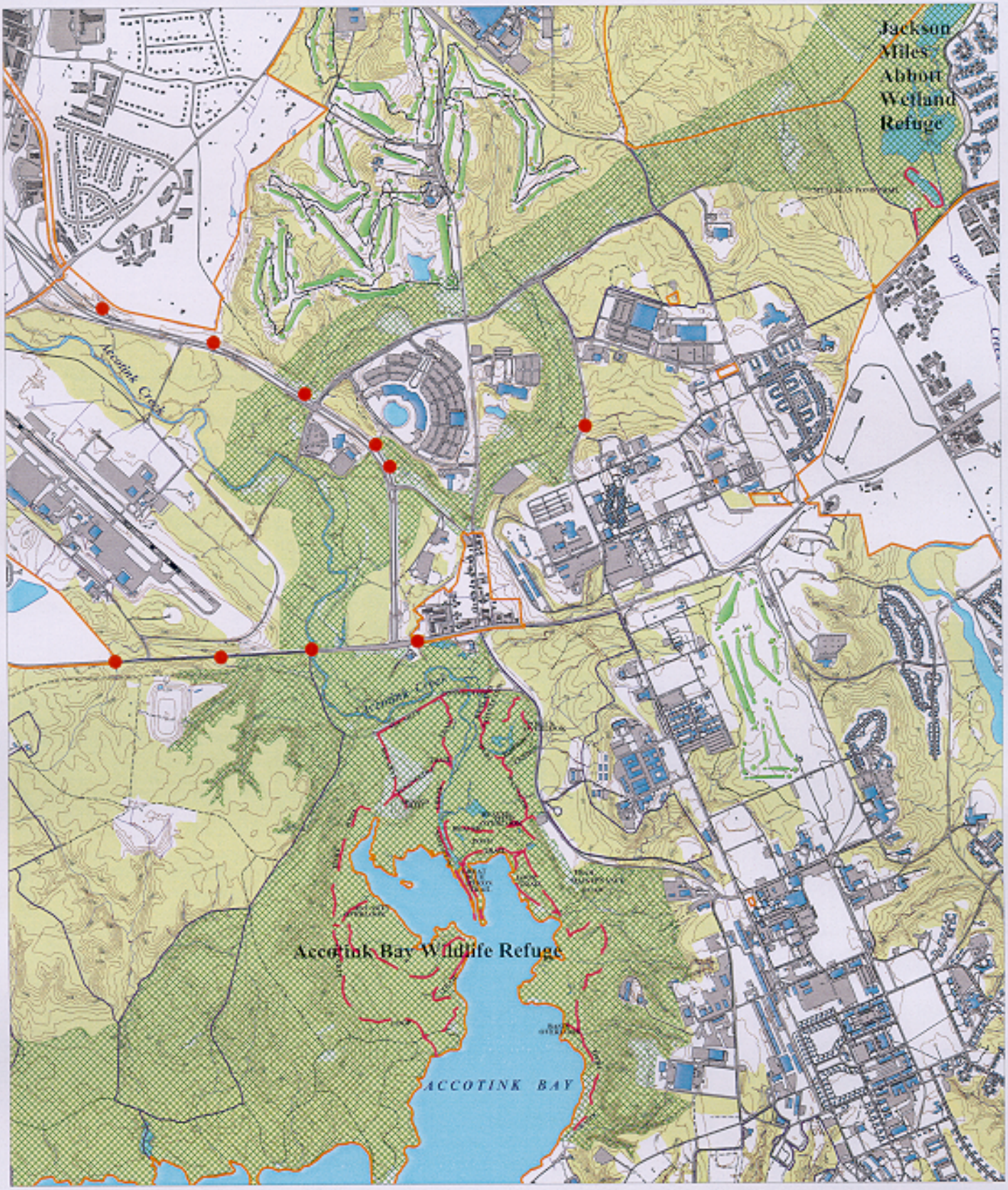
Facilities

Existing facilities are limited to the 0.6-acre hiking trail, a portion of which is accessible to persons with disabilities, two fishing piers accessible to persons with disabilities over Mulligan Pond, a wildlife viewing structure over the impoundment area, and parking facilities and an information kiosk at the entrance on Meers Road. The JMAWR boundary and facilities have been incorporated into the installation GIS.

13.2.2.3 Fort Belvoir Forest and Wildlife Corridor

History

The Fort Belvoir Forest and Wildlife Corridor was established in 1993 as a NEPA mitigation action to offset the ecological impacts of habitat fragmentation caused by several major construction projects on Fort Belvoir. The corridor was established to protect significant wildlife habitat, and to maintain a continuous area of natural forest habitat connecting larger natural areas to the north and south of Fort Belvoir, facilitating wildlife movement through the installation (Paciulli, Simmons and Associates, Ltd., 1993).



Wildlife Crossings

Refuge Hiking Trails

Pohick Trail--Wheelchair Accessible

N

HIKING TRAILS and WILDLIFE CROSSINGS on FORT BELVOIR

SOURCE: FORT BELVOIR GIS CENTER, 2000

FIGURE: 13.2

The Fort Belvoir Forest and Wildlife Corridor was established to have a minimum width of 250 to 300 meters (820 to 984 feet), based upon the results of a George Mason University study of minimum corridor widths for wildlife migration (Ernst et al., 1998). As shown in Figure 4.1, the corridor extends from JMAWR in the northeastern part of the installation to the ABWR in the southwestern part. The corridor and the two refuges together provide a continuous forest band through Fort Belvoir. As of 2000 the corridor encompasses 742 acres, exclusive of the refuge areas. The corridor underwent a minor modification of its boundaries in 1999, as it was incorporated into the installation GIS. Apart from that modification, there has been no expansion of the corridor since it was established.

The corridor includes some of the installation's habitat for the wood turtle and the PIF priority bird species. The corridor also includes the riparian forest buffer and wetlands along the section of Accotink Creek, north of U.S. Route 1, and along two major drainages to Accotink Creek.

Use

The corridor is not open to public use, except for installation-authorized events. Military training occurs within the parts of the corridor that are designated as training land. The installation bow hunting program authorizes controlled access to designated corridor areas. Fort Belvoir has allowed specific recreational events, such as volksmarches, on a case-by-case basis when such events would not conflict with the military training mission or with resource conservation. No facilities construction, except for wildlife habitat/movement enhancement, is authorized. No user surveys have been conducted within the corridor.

Facilities

The only corridor facilities are six wildlife crossing structures (Figure 13.2): three of which cross the Fairfax County Parkway, two that cross U.S. Route 1, and one that crosses Gunston Road. Four additional crossings outside the corridor were also constructed: two of which cross the Fairfax County Parkway, and two that cross U.S. Route 1. Wildlife crossing structures consist of oversized box culverts with natural bottoms and daylighting by grids in the center of the culverts. The wildlife crossing structures were installed to mitigate the impacts of the construction of these roads on wildlife movement through the corridor.[2] There are no public access facilities (e.g., trails) in the corridor. The corridor boundary and the wildlife crossing structures have been incorporated into the installation GIS.

13.3 SPECIAL NATURAL AREAS MANAGEMENT

13.3.1 Special Natural Areas Management Recommendations

The results of the planning level natural resources surveys of Fort Belvoir (Sections 7 through 12) document a variety of ecologically significant resources occurring both inside and outside the boundaries of the three designated Special Natural Areas. The study results warn that these resources are vulnerable to a number of threats, including displacement by exotic species; de-

[2] These mitigation efforts did not address all previously existing roads and developed areas within the Corridor.

stabilization, erosion or sedimentation resulting from stormwater problems; damage/mortality caused by insects or disease; and, disturbance/destruction caused by wildlife (e.g., deer overbrowsing, beaver activity) or by overuse by humans. The resources within the designated Special Natural Areas, while protected from direct loss to development, are nonetheless vulnerable to "spill-over" impact by any adjacent development (e.g., lighting, noise, activity, accidental chemical spills, stormwater runoff, problem wildlife, etc.). The resources that remain outside the designated Special Natural Areas are vulnerable to displacement by development.

The planning level surveys, most notably the ecological communities survey (McCoy and Fleming, 2000) and the natural heritage inventory (Hobson, 1996; 1997), recommended management actions to control the threats to the installation's significant resources. The natural heritage inventory (Hobson, 1996) recommended the establishment of conservation areas, covering areas larger than the present-day refuges, to protect the significant resources within and adjacent to the refuges from development and other land disturbing activities, and to buffer the adverse impacts of nearby developed land uses on sensitive resources (Section 12). In addition to recommending two conservation areas, one each for the ABWR and the JMAWR, the natural heritage inventory recommended establishing a third conservation area to protect a significant rare species in training area T-17, along Gunston Cove (Hobson, 1997) (Figure 8.2). These DCR-NHP-recommended conservation areas would essentially increase by size and number the designated special natural areas on post. They would dramatically increase both the areas associated with the ABWR and JMAWR, and would add a new area at T-17. It should be noted that the DCR-NHP conservation area recommendations are not an express recommendation to increase refuge boundaries to those limits. Instead, they represent a recommendation to enact conservation management within those defined areas. The recommended conservation area boundaries represent the whole of the areas within which such management actions are recommended by DCR-NHP to conserve Fort Belvoir's ecologically-significant resources.

13.3.1.1 Refuges

In 1998 Fort Belvoir prepared the *Comprehensive Management Plan for the Fort Belvoir Refuge Complex* (Paciulli, Simmons and Associates, Ltd., 1998b). Development of this plan took into account DCR-NHP's conservation recommendations, the results of the planning level surveys completed to date (which excluded the watershed, aquatic resources, ecological communities, and bird surveys), as well as the Fort Belvoir military mission. This plan recommended that management priority be given to the protection of the refuges from manmade or natural disasters. The specific management recommendations made in the plan can be grouped according to five topics:

- Use Management
- Boundaries and Buffers
- Natural Resources Conservation
- Educational Opportunities
- Facilities Maintenance

Table 13.2 presents a summary of the plan's key management recommendations, organized according to these five topics.

Table 13.2: Key Management Recommendations from the Comprehensive Management Plan for the Fort Belvoir Refuge Complex

Topic	*Management Recommendations*
Use Management	■ Limit public access to the presently accessible areas, unless future studies specifically indicate that additional public areas can be created without damage to the ecosystem. ■ Prohibit horses, bicycles, ORVs, boat landings and launchings, etc. ■ Allow classes, and scientific research and inventory in the non-public areas. ■ Allow archery hunting in the public and non-public areas as a means to control the deer population. ■ Allow fishing in Mulligan Pond, Dogue Creek, Accotink Creek, Pohick Creek, and Accotink and Pohick Bays. ■ Limit recreation to hunting, fishing and passive recreational activities such as wildlife/nature photography. ■ Prohibit/control large organized recreational events such as volksmarches and orienteering competitions. ■ Encourage non-disruptive military use if other natural (training) areas do not provide proper space or training scenarios.
Boundaries and Buffers	■ Add training area T-10 to the ABWR, to protect the active bald eagle nest. ■ Add the landfills to the refuge(s) since other (land-disturbing) uses are not feasible at the landfills. Landfills occur in areas T-6, T-16, W-1, and W-3. ■ Modify the refuge boundaries to follow the top of slopes and specific contours. Add small areas, as necessary, to bring the refuge boundaries out to known fences, roads or other geographic feature. Delete small, isolated segments that are not functionally part of the refuge. ■ Expand JMAWR (1) to the south/southwest to include the remainder the of wetlands and floodplains southwest of Mulligan Pond and along the south side of Kingman road, and (2) to the north to include the wetlands and bottomlands from Kingman Road north to Telegraph Road. ■ Provide a buffer to both refuges to protect against development adjacent to the refuges, in the event training departs, and the training land is developed or excessed.
Natural Resources Conservation	■ Protect and enhance conditions for endangered, threatened, and rare species and their habitats (Section 12). ■ Protect and enhance wetlands (Section 8). ■ Protect and enhance habitat conditions for anadromous fish species (Section 7). ■ Protect and enhance habitat conditions for non-game bird populations (Section 11). ■ Conserve riparian forest buffer habitat (Section 7).

Table 13.2: Key Management Recommendations from the Comprehensive Management Plan for the Fort Belvoir Refuge Complex	
Topic	***Management Recommendations***
	(continued)
Educational Opportunities	■ Ensure that the refuges are a showcase for Fort Belvoir and other partners in environmental education and resource management. ■ In collaboration with various partners, provide a wide range of innovative environmental education programs and activities. ■ Ensure that the primary objectives of environmental education are to conserve and enhance biological resources, and to motivate citizens to learn the role of management in the maintenance of healthy ecosystems.
Facilities Maintenance	■ Rehabilitate Mulligan Pond, and repair and upgrade the public access facilities at JMAWR. ■ Repair and upgrade public access facilities at the ABWR. ■ Construct a refuge headquarters and environmental education center at the ABWR.

Source: Paciulli, Simmons and Associates, Ltd., 1998b

13.3.1.2 Forest and Wildlife Corridor

In 1993, Fort Belvoir prepared *The Forest and Wildlife Corridor Management Plan* (Paciulli, Simmons and Associates, Ltd., 1993). This plan recommended two conservation management initiatives to conserve the habitat value of the corridor, and to protect and enhance wildlife movement: (1) restrict disruptive activities within the corridor, and (2) enhance natural habitat within the corridor. The plan stressed establishing and maintaining woodland habitat diversity, restricting land clearing, limiting public access, reducing edge habitat and providing wildlife habitat enhancement. Key management recommendations from the 1993 corridor management plan are summarized below:

- Reduce fencing within the corridor.
- Add wildlife crossing structures at existing roads (e.g., U.S. Route 1) and in new road designs.
- Use plantings, integrated pest management practices and stormwater management practices to minimize impacts of the North Post Golf Course.
- Use forest management practices (e.g., forest fire protection, insect and disease control, timber stand improvements) to preserve biodiversity and maintain forest health.
- Reforest disturbed areas.
- Avoid large-scale human intrusions that may fragment the corridor.
- Provide awareness training in corridor conservation and management.

In 1999, Fort Belvoir prepared an updated corridor management plan (Paciulli, Simmons and Associates, Ltd., 1999d). The 1999 plan update management recommendations are summarized below:

- Refine the corridor boundary.
- Maintain and enhance existing wildlife crossing structures.
- Identify locations for future wildlife crossing structures, and reforest disturbed and open areas.
- Safeguard the corridor and its function from future encroachment by development.

13.3.2 Special Natural Areas Management Actions to Date

Fort Belvoir is a strong proponent for conservation of ecologically significant resources. Fort Belvoir recognizes the existence and importance of such resources within its boundaries, and has used the DoD- and DA-authorized designation of Special Natural Areas to conserve these resources. Fort Belvoir further recognizes the importance of balancing compatible public access to and use of these resources. As directed by the Sikes Act and DoD and DA policy, the installation has managed public access to and use of the installation's Special Natural Areas accordingly.

Fort Belvoir manages the three designated Special Natural Areas in accordance with the resource conservation and multiple use requirements of DoDI 4715.3 and AR 200-3. To date, the key management emphasis for Fort Belvoir's designated Special Natural Areas has been to conserve areas of ecologically significant resources, while (1) providing the public an opportunity to access those resources for environmental education, scientific research and study, and low-intensity outdoor recreation consistent with resources conservation, and (2) allowing for non-disruptive military activities.

The following presents management actions undertaken specifically to address conditions within the Special Natural Areas on Fort Belvoir, as well as actions addressing public access and use, including the installation natural resources education program. Installation-wide natural resources management actions (e.g., aquatic resources management, wetlands management, fish and wildlife management, threatened/endangered species management, native vegetation resources management) are addressed in Sections 7 through 12.

13.3.2.1 Refuges

Accotink Bay Wildlife Refuge

The following key management actions have been undertaken in the ABWR during the past five years:

- Command approval to expand the refuge boundary to include T-10 (to be renamed W-8) to incorporate the whole of the active bald eagle nest protection area into the refuge

- Modified grounds maintenance actions at several locations (e.g., refuge main entrance, "bus turn around area") to restore/enhance native grassland conditions

- Coordinated timber stand improvement actions with wildlife habitat enhancement actions within several planted pine stands

- Used wildlife seed mixes to stabilize disturbed areas (e.g., Fairfax County sewer line replacement project)

- Executed watershed restoration projects for two refuge subwatersheds

- Initiated *Phragmites australis* control actions

- Installed and maintained various wildlife habitat improvement structures throughout the refuge

- Renovated and upgraded the refuge trail system, including trail realignment, bridge repair/replacement, and wildlife viewing structures. Included the new Pohick Loop Trail, which is accessible to persons with disabilities. Performed routine maintenance of trail facilities

- Renovated the refuge main entrance, including parking area repair and stormwater improvements, repair and maintenance of toilet facilities

- Developed and implemented a Refuge Facilities Maintenance Plan, as part of the installation's Real Property Maintenance Contract

- Developed and installed new interpretive displays.

Jackson Miles Abbott Wetland Refuge

- Renovated Mulligan Pond, including installation of new water control structure, stabilization of inlet and outlet areas, bank planting, dredging for sediment removal, and fish stocking

- Renovated and upgraded the refuge trail system, including trail realignment, wildlife viewing structure, trail section that is accessible to persons with disabilities, and fishing pier

- Renovated the refuge main entrance, including parking facilities

- Developed and implemented a Refuge Facilities Maintenance Plan, as part of the installation's Real Property Maintenance Contract

- Developed and installed new interpretive displays.

13.3.2.2 Forest and Wildlife Corridor

Management actions to date have focused on conserving the Forest and Wildlife Corridor as a continuous forested band through Fort Belvoir, and maintaining and enhancing wildlife

movement through the corridor. Corridor management actions that have been accomplished since 1993 include the following:

- Developed and installed two wildlife crossing structures for the Fairfax Parkway, and one for Gunston Road, where these roads cross the corridor
- Emphasized siting of new facilities outside the corridor boundaries
- Minimized land-disturbing activities and tree removal within the corridor
- Relocated the southern portion of the Intelligence and Security Command security fence outside of the corridor
- Reforested the disturbed area between the North Post Golf Course and Kingman Road
- Reforested the open area along the Fairfax County Parkway through the corridor
- Reforested the disturbed area to the south of the Defense Logistics Agency Child Care Complex, between Beulah Road and Backlick Road
- Reforested the disturbed area east of the Beulah Road-Wills Road intersection
- Executed a natural stream channel restoration project to improve conditions at one of the Fairfax County Parkway wildlife crossing structures
- Enforced trespassing and illegal dumping infractions within the corridor
- Responded to a variety of use requests for the corridor land area.

13.3.2.3 Conservation Education and Outreach

The installation's refuges serve as the foundation of the installation's natural resources education program. Where compatible with resource conservation, the refuges are made available for use as outdoor classrooms for educational programs run by off-post organizations (e.g., field trips by local high school and university classes), as well as for installation-run programs. The ABWR Environmental Education Center provides limited indoor classroom space to support the refuge-based educational programs, and is the central information source for refuge use and resources.

Fort Belvoir has recently expanded its focus to reach out to the broader community outside its gates. As such, the installation's education and outreach program includes participating in and promoting the conservation education and outreach components of such programs as the Chesapeake Bay Program, the PIF Program, and the Virginia Birding Trail Program.

Education

The following educational activities have been accomplished through 2000:

- Hosted the 1999 DoD Earth Day Celebration in the JMAWR

- Hosted approximately 15 weekend interpretive programs to the public during the 2000 season (e.g. bird walks, fishing clinics, wildflower walks, etc.)
- Provided Earth Day Program to the Fort Belvoir Elementary School in 1999
- Hosted Earth Day 2000 with approximately 100 children from Fort Belvoir's Youth Services participating in environmental education activities
- Received attendance of approximately 1,540 people at the ABWR Environmental Education Center from July to October 2000
- Supported the Boy Scouts of America summer camp by providing educational activities for 312 scouts
- Supported Youth Services and Defense Logistics Agency summer camps for 60 children in 1999 and 26 children in 2000
- Conducted programs for Metz Junior High School, and Henderson Elementary School in 2000
- Participated in the Partners in Education program with Mount Vernon High School and Woodley Hills Elementary School
- Participated in the Woodley Hills Elementary School Science Day in 2000
- Coordinated native plant demonstration project with Fort Belvoir Girl Scouts and Garden Club.

Outreach

The following outreach activities were included as part of the management of the refuges:

- Hosted the 2000 PIF Mid-Atlantic Coastal Plain Bird Conservation Plan Conference with over 70 participants from local, regional, state, and federal natural resources agencies
- Hosted the local VDGIF's Virginia Birding Trail Program informational session
- Supported various environmental events by outside entities (e.g., Fairfax County Arbor Day, Earth Day on the Mall in Washington, D.C.)
- Supported various scouting organization events (e.g. volksmarches, Eagle Scout projects)
- Hosted the 1999 and 2000 National Public Lands Day events, including activities such as renovations of trail facilities on the McCarty and Basin trails
- Held various shoreline clean-up events, including the 2000 Virginia Waterways Shoreline Clean-Up.

13.3.2.4 Special Natural Areas Law Enforcement

Through its Memorandum of Agreement for Cooperative Law Enforcement between the U.S. Fish and Wildlife Service and the U.S. Army Garrison Fort Belvoir, dated 20 February 1996 (Appendix A), Fort Belvoir has one Special Agent within ENRD. The agreement is to provide mutual law enforcement benefits to the installation and to the Fish and Wildlife Service by sharing expertise, training, intelligence, information, and specialized equipment. The intent of this agreement is to provide the Special Agent with the authority to enforce all laws administered by the U.S. and the installation relating to fish, wildlife, and other natural resources. The agreement delegates authority to the Special Agent to enforce several specific federal laws on Fort Belvoir including the following: Lacey Act Amendments of 1981 (16 U.S.C., 3371-3378), Migratory Bird Treaty Act (16 U.S.C. 703-712), Migratory Bird Hunting and Conservation Stamp Tax Act (16 U.S. C. 718-718h), Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d), Airborne Hunting Act (16 U.S. C. 742J-1), National Wildlife Refuge Systems Administrative Act (16 U.S.C., 668dd-668ee), Endangered Species Act of 1973 (16 U.S.C., 1531-1543), Marine Mammal Protection Act of 1979 (16 U.S.C., 1361-1384, 1401-1407), and Archeological Resources Protection Act of 1979 (16 U.S.C. 470a. (A)-(1) (A)).

13.4 CONTINUING AND FUTURE SPECIAL NATURAL AREAS MANAGEMENT

Fort Belvoir intends to maintain and manage the refuges and the Forest and Wildlife Corridor with a primary management emphasis on resource conservation. Fort Belvoir will allow for and promote public access for compatible uses such as environmental education, scientific research and study and low-intensity outdoor recreation, where such access and use is consistent with resource conservation. Fort Belvoir will continue to allow hunting and fishing, consistent with resource conservation objectives. Fort Belvoir will also allow for non-disruptive military activities in these areas, when such activities cannot be supported in the designated training areas, and where consistent with resource conservation objectives. Management of the refuges and corridor will continue to follow the principles of ecosystem management, and will emphasize conservation of the following resources which, as documented in Sections 7 through 12, have been assigned a high conservation priority through federal or state statute or regulation, DoD or DA policy, DoD-partnered programs (e.g., Chesapeake Bay Program, PIF program), through the State Natural Heritage Program, or through recognized importance to regional ecosystem function (e.g. wildlife migratory routes):

- Wetlands (Figure 8.1)
- Riparian forest buffers, and designated riparian resource protection areas (RPAs) (Figure 4.2)
- Recognized significant habitat for the federal-listed threatened / state-listed endangered bald eagle (Figure 12.1)
- Habitat for the state-listed threatened wood turtle (Figure 12.1)

- Habitats for state rare plant species and/or globally rare and state rare animal species (Figure 12.3)
- State rare plant communities (Figure 12.2)
- Habitats for PIF priority bird species (Figure 11.1)
- Waterways that provide passage and spawning habitats for anadromous/migratory fish, including river herring (Figure 11.2)
- Contiguous forest that provides migratory corridor(s) for wildlife (Figure 11.2)
- A rare, intact example of an undisturbed watershed within the Mid-Atlantic region (subwatershed 48) (Figure 7.2).

As addressed in Section 13.2.2 and depicted in Figure 13.1, these ecologically significant areas are not completely contained within the boundaries of the installation refuges or corridor. As addressed in Section 13.3, DCR-NHP recommended additional conservation measures to encompass these areas. Consequently, Fort Belvoir recognizes the need for additional management actions to protect these resource areas. Appropriate management actions may be to expand the refuge and/or corridor boundaries to encompass specific resource areas, or to establish buffer areas in association with the refuges and/or corridor. Or, it may be to define area-specific land-use designations that would be consistent with conservation of these resource areas. Fort Belvoir recognizes that development of a management strategy that would both serve mission needs and provide for appropriate conservation of these resource areas will be a complex action. It appears that the first step should be to re-consider the present boundaries of the refuges and corridor to ensure that the designated areas encompass the most critical of the resource areas. Figure 13.1 presents a composite of the locations of all of the ecologically significant resources on Fort Belvoir. It clearly indicates those land areas having the greatest concentration of resources that would most be appropriate to add to the refuges and corridor.

13.4.1 Special Natural Areas Management Objectives

1. Protect against impacts to natural resources that have been assigned high conservation priority:
    a. Wetlands (Figure 8.1)
    b. Riparian forest buffers, and designated riparian resource protection areas (RPAs) (Figure 4.2)
    c. Recognized significant habitat for the federal-listed threatened / state-listed endangered bald eagle (Figure 12.1)
    d. Habitat for the state-listed threatened wood turtle (Figure 12.1)
    e. Habitats for state rare plant species and/or globally rare and state rare animal species (Figure 12.3)

f. State rare plant communities (Figure 12.2)

g. Habitats for PIF priority bird species (Figure 11.1)

h. Waterways that provide passage and spawning habitats for anadromous/migratory fish, including river herring (Figure 11.2)

i. Contiguous forest that provides migratory corridor(s) for wildlife (Figure 11.2)

j. A rare, intact example of an undisturbed watershed within the Mid-Atlantic region (subwatershed 48) (Figure 7.2)

2. Provide opportunities for environmental education, scientific research and study, and low-intensity outdoor recreation, consistent with resource conservation.

3. Support military training and testing consistent with resource conservation.

13.4.2 Special Natural Areas Management Strategies

1. Maintain designated set-aside areas for ecologically significant resources, consistent with DoD policy for setting aside areas for conservation. Such areas include the two installation refuges and the Forest and Wildlife Corridor. Continue to designate these set-aside areas as "environmentally constrained to development" in the installation Master Plan.

2. Continue to obtain scientific information on refuge and corridor resources to support our knowledge of their biodiveristy, to identify stresses and detect changes to biodiversity, and to evaluate the effectiveness of management actions. Continue to incorporate the refuges and corridor into the installation-wide survey and monitoring programs (e.g., rare species surveys [Section 12.2], bald eagle monitoring [Section 12.2], aquatic monitoring [Section 7.2.2], etc.). Develop and implement studies and surveys as needed to address management issues specific to the refuges and/or corridor. These include:

   - User surveys of the refuges

   - Wildlife movement through the corridor, including wildlife use of the crossing structures (Section 11.2).

3. Review the existing boundaries for the two installation refuges, and consider expanding the boundaries or establishing buffers to protect ecologically significant resources that are inside the refuges as well as ecologically significant resources that are outside the refuge boundaries. This was recommended by the Natural Heritage Program (Section 12) (Hobson, 1996) and by the *Comprehensive Management Plan for the Fort Belvoir Refuge Complex* (Paciulli, Simmons and Associates, Ltd., 1998b).

4. Continue to control access to and use of the refuges and corridor.

   - Continue to limit refuge use to environmental education, scientific research and study, and low-intensity outdoor recreation and military testing and training, consistent with

resource conservation. Continue to prohibit land disturbing activities, and other activities and events that may conflict with resource conservation.

- Continue to limit corridor use to scientific research and study, and low-intensity outdoor recreation and military testing and training, consistent with resource conservation. Continue to prohibit land-disturbing activities, and other activities and events that may conflict with resource conservation.

- Continue to require coordination of refuge and corridor access and use requests through ENRD.

- Continue to monitor refuge and Corridor use, and evaluate effect on resource conservation. Considering altering use policy, if necessary, to protect resources.

- Develop and issue a Refuge Use and Fact Sheet.

5. Continue to prioritize the refuges and corridor during resource management projects (e.g., invasive/exotic species control, watershed restoration, problem wildlife control, vegetation restoration and enhancement, etc.)

6. Maintain the installation's refuge complex as the foundation for the natural and cultural resources education program.

   - Develop, maintain, and staff an Environmental Education Center.

   - Develop and maintain environmental education materials, such as displays, handouts, and curricula.

   - Continue Partner in Education relationship with local schools.

   - Investigate partnering, or entering into Memoranda of Agreement with Universities or other educational institutions to support educational programs at the refuge.

   - Conduct educational events in/associated with the refuge. Support appropriate events conducted by outside organizations.

   - Develop and maintain interpretive displays along the refuge trail system.

7. Continue routine maintenance of refuge trail system and associated public access facilities.

8. Establish and manage a Qualified Volunteer Program for the refuges, to provide support in facilities maintenance and in educational programs.

9. Continue to preserve and enhance wildlife habitat and the wildlife migratory function within the corridor by maintaining a contiguous forest cover.

- Continue to prohibit land-clearing and development within the corridor.[3]

- Add wildlife crossing structures where needed. Perform routine maintenance, and repair and modify existing structures as needed.

- Continue to limit public assess to the corridor.

- Consider expanding the corridor boundary, or designating a buffer, to protect corridor resources, as recommended by the updated corridor management plan (Paciulli, Simmons and Associates, Ltd., 1999d). Expansion should include designation of a corridor boundary up Accotink Creek to Telegraph Road. Wildlife monitoring has demonstrated significant wildlife migration along the Accotink Creek stream valley. Such an expansion would incorporate the whole of the Accotink Creek riparian area into the installation corridor and refuges, consistent with the Chesapeake Bay Riparian Forest Protection Initiative.

10. Continue to provide technical assistance for emergency situations, such as fuel spills or uncontrolled fires that threaten special natural area resources, as needed.

11. Continue to respond to requests for technical information from on-post and off-post entities, as appropriate.

12. Continue to investigate and enforce violations of federal and state laws and regulations, as well as DoD, DA, and Fort Belvoir policies.

[3] Some clearing and development will be unavoidable, such as utility line installation and maintenance, and roadway widening.

14.0 Implementation

14.1 NATURAL RESOURCES PROJECTS

The Natural Resources projects in this Integrated Natural Resources Management Plan (INRMP) can be categorized into the following three work types:

- Compliance
- Stewardship
- Service

Each of these three work categories includes schedule-driven projects (Natural Resources Branch [NRB]-defined actions, such as biological studies and watershed improvement projects) and event-driven projects (response actions, such as technical response and support to spills or wildfires, or to customers on pest management or problem wildlife incidents). They include short-term actions such as providing technical input to siting a new facility, as well as long-term actions, such as monitoring the success of a wetland mitigation project.

Compliance projects encompass all of the actions necessary to ensure that the installation is in compliance with applicable federal, state, regional and local natural resources statutes and regulations. These projects include routine compliance actions; such as annual reports on Virginia Department of Game and Inland Fisheries wildlife salvage and display permits, and annual bald eagle surveys; as well as project-specific compliance actions, such as a Joint Permit Application for a specific construction project. Compliance projects encompass coordination with regulatory authorities; such as development and negotiation of permit applications; as well as associated support actions, such as field surveys to identify baseline conditions, and monitoring programs to assess the success of impact mitigation measures.

The compliance projects presented in this INRMP were identified from existing and established compliance actions as well as from projections of future requirements. Some of the compliance projects are known and quantifiable (e.g., monitoring of wildlife movement through the wildlife crossing structures within the Forest and Wildlife Corridor, which was established as a National Environmental Policy Act mitigation action in the Base Realignment and Closure Environmental Impact Statement). Others, such as developing, negotiating, and implementing Clean Water Act permits, or performing Section 7 consultation under the Endangered Species Act for future construction projects, are not readily quantifiable. For instance, the number or complexity of construction projects, as well as the regulatory agency climate, may be different in 5 years and therefore impossible to predict today.

Stewardship projects are actions identified and undertaken to promote the conservation goals expressed in Department of Defense (DoD) and Department of the Army (DA) policies, and in DoD and DA partnership programs, such as the Chesapeake Bay Program. Stewardship projects

encompass such actions as resource conservation, technology demonstration, and outreach. These types of projects are typically identified and planned by the NRB, although there are occasions where Fort Belvoir will be requested by higher headquarters (e.g., Major Army Command or DA level), or by outside organizations (e.g., Fairfax County) to implement or participate in a stewardship project. Such projects may include streamside planting for regional riparian reforestation goals, wetland creation for Chesapeake Bay Program goals, or participation in the Partners in Education program. Stewardship projects are the actions that truly establish the installation's position as a leader in natural resources conservation. Given Fort Belvoir's location within the metropolitan Washington D.C. area, there is significant opportunity for the installation to participate in, and benefit from, high-priority and high-visibility stewardship projects.

The stewardship projects presented in this INRMP were identified based upon established and projected conditions and opportunities. These types of projects are more easily projected than compliance projects. Stewardship projects identified in this INRMP include constructing low impact development (LID) demonstration projects, performing various habitat enhancement projects, reforesting riparian areas, hosting natural resources conferences and training events, and participating in regional public outreach programs such as the Virginia Coastal Birding Trail. While this INRMP identifies stewardship projects reasonably anticipated at this time, it is possible for new stewardship opportunities to arise at any time (e.g., new state initiatives, new DoD-funded conservation programs).

Service projects consist of actions undertaken to enhance the quality of life for the military community, support military training and testing activities, and support tenant operations at Fort Belvoir. While some service projects (e.g., the Fort Belvoir environmental education and environmental volunteer coordination programs) are NRB-defined actions, most of the service projects undertaken by NRB are response-driven actions. Examples include responding to customer requests for solving problems with pest management; wildlife control; or grounds maintenance; or responding to customer requests for recreational and educational events or volunteer service. These types of projects also include responding to events and requests for actions that arise from outside the installation boundary. Examples of these types of projects include responding to the appearance of West Nile Virus in the Washington D.C. metropolitan area and responding to Fairfax County's request for installation participation in a regional raccoon rabies vaccination program. Although service projects tend not to have much advance warning, they typically require immediate and sustained response.

Service projects are the least quantifiable projects within the natural resources management program. This INRMP identifies specific recurring service projects, such as goose hazard management at the airfield, hunting program support, environmental education program management, and the environmental volunteer coordination program. It also identifies potential broad types of services that can be expected to be required from the natural resources program into the future. These services include technical responses to spills and wildfires; response to customers regarding pest management, wildlife and grounds maintenance problems; response to customers requesting access to natural resources for recreational or educational purposes; and responses to on-post and off-post entities requesting information on installation natural resources and their management. This INRMP cannot predict or quantify the exact number or complexity of service projects required of the natural resources management program for the next five years. The unforeseen arrival of West Nile Virus is an example of the type of unpredictable events that

place urgent demands for unprogrammed service on NRB staff. There are likely to be additional service projects arising over the next 5 years that have not been identified in this INRMP.

Figure 14.1 presents a summary of the projects from this INRMP, excluding program management functions. The figure indicates whether the projects are compliance, stewardship or service. It should be noted that the projects presented in this INRMP, and summarized in Figure 14.1, represent a continuation of the projects that are in place or in planning as of 2000. In other words, implementation of these projects does not represent a departure from, nor an expansion of, the natural resources program as it exists in 2000. At the end of this section there is a summary of individual projects listed by fiscal year (Tables 14.3 through 14.9). Neither Figure 14.1 nor Tables 14.3 through 14.9 include natural resource program management actions.

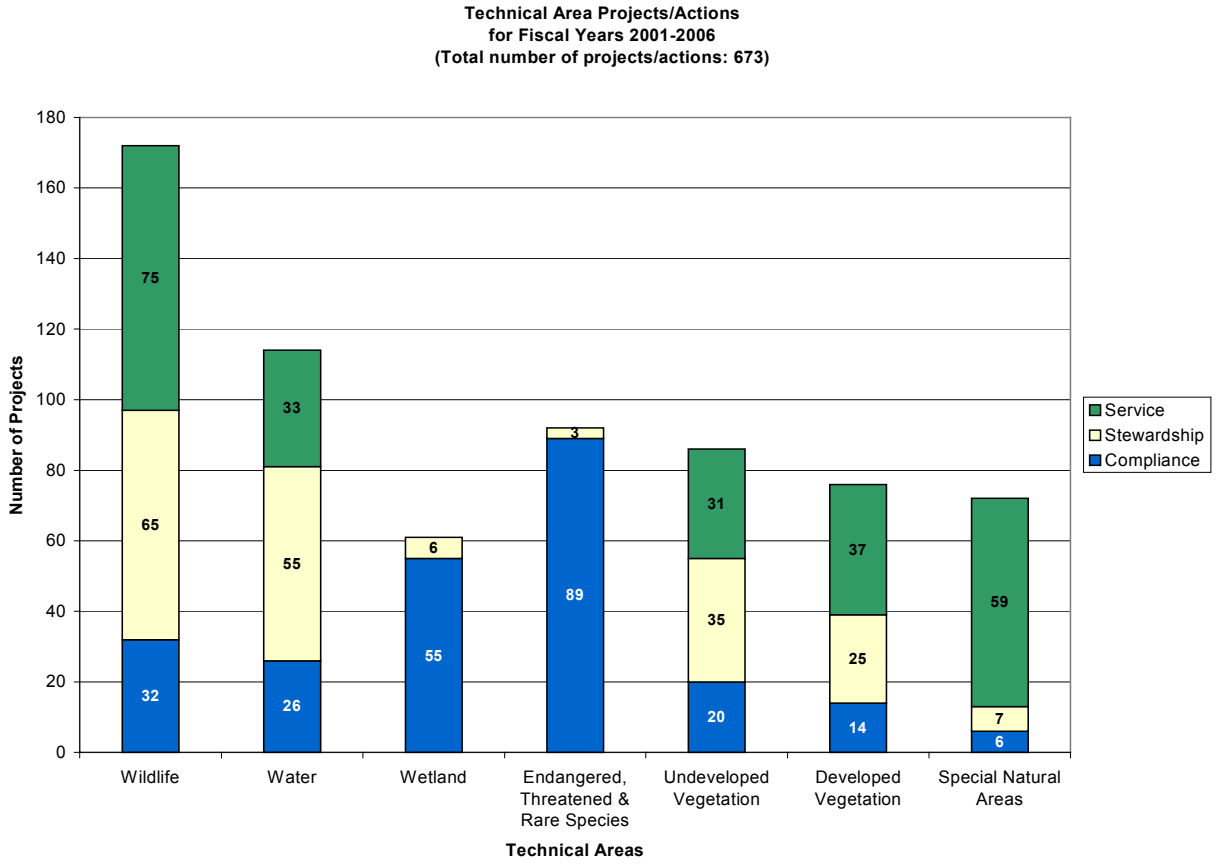


Figure 14.1: Natural Resource Projects

14.2 NATURAL RESOURCES PROGRAM MANAGEMENT ORGANIZATION AND STAFFING

Responsibility for development and control of the Fort Belvoir natural resources management program is with the NRB of the Environmental and Natural Resources Division (ENRD) of the Directorate of Installation Support (DIS). NRB has the responsibility for most but not all of the facets of program implementation; the exception is facilities management. The Contract Management Division (CMD) of DIS has the responsibility for the installation's operations and maintenance program, and facilities construction program, both of which are contracted out. This means that all base operations (BASEOPS) grounds maintenance, landscaping, pest management and stormwater management projects are executed by contractors controlled by CMD.

As of 2000, execution of natural resources projects is accomplished through contractors or funded government agencies, with the program management components of the projects (e.g., contract management, agency negotiation) being performed by government staff. It is intended to continue this project execution strategy. Continuation of this project execution strategy does not represent a departure from the natural resources program as it exists in 2000.

In 2000, NRB had four government staff positions. These positions provide for a core of professionally trained and experienced natural resource managers, as required under the Sikes Act. Government staff in the four natural resources specialist positions are program managers, responsible for controlling the development and implementation of the natural resources management program. Within their technical areas, the government staff are responsible for developing and overseeing execution of natural resource policy; developing and controlling short- and long-term program execution strategies (including budgets and work plans); developing, selecting, and controlling contracts and contractors; negotiating with regulatory agencies; representing the installation to outside entities; and making decisions on natural resource access, use, and disposal actions. Table 14.1 presents the technical areas managed by NRB staff.

Table 14.1: Natural Resource Branch Technical Areas

Natural Resource Branch Chief	***Natural Resource Specialist***	***Natural Resource Specialist***	***Natural Resource Specialist***
General program oversight all NR programs	Forestry	Watersheds	Refuges
Wetlands	Ground maintenance	Stormwater	Environmental education program
Endangered, threatened and rare species	Pest management	Wildlife	Environmental volunteer program
Aquatic resources	Landscaping	Forest & Wildlife Corridor	Environmental training and outreach

Program Management functions consist of actions essential to implementing the natural resources program in each technical area. Program management involves:

- Establishing program policies, goals and objectives to assure installation compliance with all applicable regulatory, stewardship, and service requirements
- Developing and executing strategies for planning, organizing, and staffing program work (e.g., the Program Objective Memorandum [POM] and the Annual Work Plan)
- Developing and executing strategies for controlling the execution of program work (e.g., contract management, staff supervision, schedule, and resource management)
- Developing and executing strategies for integrating the natural resources program with on-post and off-post organizations and activities
- Developing and executing strategies for determining the success of the program at accomplishing the program goals and determining the need for program changes

Table 14.2 presents a summary of the natural resources program management functions necessary to execute projects in each technical area.

Table 14.2: Program Management Functions

Goal Setting	*Planning*	*Organizing*	*Staffing*	*Controlling*	*Leading*
Determine the policies, goals, objectives, and strategies for the natural resources program.	Perform long-term and short-term planning.				
	Determine what is to be included in the POM.	Determine and establish coordination actions within NRB as well as among all installation and off-post entities that interface with the natural resource program.	Determine how projects are to be staffed (by contractor, government staff, other agency, partner organization, volunteer, etc.)	Perform regular coordination among NRB staff and contractor staff (e.g., weekly staff meetings, monthly contractor in-progress review meetings).	Take charge and initiate actions. Direct the activities of individuals and groups toward the accomplishment of the natural resources goals and objectives.

Table 14.2: Program Management Functions					
Goal Setting	***Planning***	***Organizing***	***Staffing***	***Controlling***	***Leading***
			(continued)		
	Determine what is to be included in the Annual Work Plan.	Determine and allocate authority among all proponents and implementers of the natural resource program.	Perform contract acquisition, contract management, and contract control actions. Develop Memoranda of Understanding (MOUs), Memoranda of Agreement (MOAs), and Cooperative Agreements (CAs) for partnering efforts with other agencies and organizations. Execute and control funding and actions performed under MOUs, MOAs, and CAs.	Perform regular coordination among DIS organizations (e.g., contracts management, engineering, facilities planning, and financial management).	Create an environment in which subordinates and others are rewarded for accomplishment of group and individual goals.
		Determine and use the process and metrics for measuring success of the program organization.	Perform government staff management actions (e.g., employee appraisals).	Perform regular coordination among BASEOPS organizations (e.g., Environmental Quality Control Committee [EQCC] meetings).	Clearly assign responsibilities and tasks to others and establish effective controls, ensuring that employees have the necessary resources and authority.
		Determine and direct participation in regional and national level studies and resource management initiatives (e.g., Chesapeake Bay Program, Partners in Flight Program, Partners in Education Program, Fairfax County Deer Management Program).	Respond to unplanned events. Re-allocate resources, re-prioritize work, re-direct staff, re-direct contractors, etc.	Perform regular coordination among agencies and outside individuals and entities involved in natural resource study and management (e.g., regional natural resources coordination committee).	Evaluate employees, providing performance feedback and facilitating professional growth.

Table 14.2: Program Management Functions					
Goal Setting	***Planning***	***Organizing***	***Staffing***	***Controlling***	***Leading***
			(continued)		
			Determine and use the process for measuring the success of the program staffing.	Perform project-specific negotiations with agencies.	Perform volunteer coordination with individuals and outside entities to participate in natural resources programs.
		Integrate policy into installation actions through installation regulations and policies (e.g., the Fort Belvoir Supplement to AR 200-3; the Fort Belvoir Training Regulation; resource-specific Policy Letters, such as Tree Protection Policy Letter, Integrated Pest Management Policy Letter, Refuge Use and Management Policy Letter).		Determine and use process and metrics for assessing program success.	Determine and direct participation in educational and outreach events (e.g., Earth Day events, technical conferences).
		Integrate policy into installation actions through installation plans (e.g., Real Property Master Plan).		Coordinate with natural resources agencies regarding stewardship recommendations. Determine and direct stewardship actions (e.g., for water resources, wetlands, native vegetation re-sources, fish and wildlife, endangered and threatened species) appropriate to installation mission and resources.	

Table 14.2: Program Management Functions					
Goal Setting	***Planning***	***Organizing***	***Staffing***	***Controlling***	***Leading***
(continued)					
		Integrate policy into installation actions through installation control documents (e.g., Fort Belvoir demolition permit, Fort Belvoir excavation permit, Fort Belvoir standard construction specifications for Environmental Protection).		Determine and delineate specific installation areas for conservation of significant natural resources (e.g., riparian buffers, refuges, wildlife corridor). Determine and direct conservation requirements and actions for those areas.	
		Integrate policy into installation actions through installation coordination committees (e.g., EQCC, DIS facilities maintenance committee).		Determine and direct resource conservation actions to be undertaken (e.g., reforesting riparian areas, controlling invasive/exotic species, enhancing native habitats for wildlife, correcting stormwater management problems).	
		Determine and direct resource protection to be incorporated into installation activities (e.g., incorporate best management practices [BMPs] and principles of LID on construction projects).		Review and respond to requests for service from on-post entities.	
				Review and respond to requests for support from outside entities.	
				Review and respond to requests for access to and use of natural resources on-post.	

Table 14.2: Program Management Functions					
Goal Setting	***Planning***	***Organizing***	***Staffing***	***Controlling***	***Leading***
(continued)					
				Negotiate compliance actions with regulatory agencies (e.g., formal Section 7 consultation under Endangered Species Act).	
				Represent the installation to outside agencies and the public (e.g., speak at public hearings, such as Section 404 permit hearings).	
				Determine natural resources disposal actions (e.g., timber sales).	

In 2000, ENRD had one government staff position for Special Agent. The Special Agent is responsible for investigating and enforcing natural resources compliance actions.

The four natural resources specialists are supported by various contract personnel. The natural resources specialists determine the need for contract support; determine the contract vehicle to be used; and develop, implement, and control the contracts. Contract personnel are accessed through various contract vehicles: U.S. Army Corps of Engineers indefinite delivery, indefinite quantity (IDIQ) contracts; the Oak Ridge Institute for Science and Education (ORISE) program; the Colorado State University contract; and the General Services Administration schedule; as well as through other government organizations. These organizations include the U.S. Army Corps of Engineers Waterways Experiment Station; and the Virginia Department of Conservation and Recreation, Division of Natural Heritage. NRB maintains one IDIQ contract for natural resources support and accesses other Corps' IDIQ contracts, as needed.

Contract personnel provide technical support to the development and implementation of the natural resources program. Such support includes conducting research and studies, preparing management plans and other documents, performing data management and analysis, and developing management recommendations. Specific program implementation actions performed by contract personnel include: wildlife field surveys; habitat enhancements; environmental education program development and coordination; Geographic Information System (GIS) datalayer development; goose hazard control; deer management; volunteer program coordination; problem wildlife management; and technical support to pest management, grounds maintenance and landscaping. In 2000, NRB staff was supported by nine contract personnel working on-site, and 30 additional contract personnel working off-site. (The need for three

additional on-site contractors, two for environmental education programs and one for stormwater management and erosion control was identified, but not funded.)

In 2000, the Real Property Maintenance Activities (RPMA) Contract had approximately 50 staff positions (prime and subcontractor) assigned to executing natural resources operations and maintenance (O&M) work (e.g., lawn mowing and pesticide application), and the Requirements Contracts had approximately 10 to 20 staff assigned to natural resources projects at any one time. Although these contracts are controlled by CMD, NRB staff has significant responsibility for technical oversight and coordination of these contractors' work. NRB provides policy and technical guidance and oversight to CMD to assure that the installation's facilities construction and maintenance operations are consistent with installation natural resources conservation policies and programs. NRB is a key participant in the development and source-selection of the RPMA Contract. NRB uses the RPMA contract to perform grounds maintenance, pest management, refuge facilities maintenance actions, and some habitat enhancement projects. NRB uses the Requirements Contracts to execute various construction projects such as the watershed improvement projects.

Implementation of this INRMP calls for maintaining the current NRB organization of a core of technical program managers supported by contractors: a core staff of four government staff positions, with on-site contractor support of approximately 10 personnel. The 10 contract support personnel are needed in the following quantities and disciplines: three wildlife technicians, one forestry technician, one pest management specialist, one stormwater management and erosion control specialist, one GIS specialist, and three education and outreach specialists. Off-site technical contractor support requirements will vary, depending upon project schedules. To accommodate changing program needs, and to provide maximum flexibility, NRB will continue to hold an IDIQ contract for natural resources support. NRB staff will continue to serve as Contracting Officer Representatives on this and other contracts (e.g., other Corps of Engineers IDIQ contracts).

In addition to managing contracts and executing planned projects for their technical areas, the NRB staff must also have the ability to respond to customer service and emergency response/corrective actions. Customer service and emergency response/corrective actions vary widely but they typically all have several things in common when responding: (1) they require an immediate response and (2) they require continued commitment through completion. In general, customer service and emergency response/corrective actions cannot be ignored, deferred, or partially completed. Often, they have Command-level interest. More than 70 % of NRB government staff time is spent supporting customer service and emergency response/corrective actions. While NRB staff has developed a program of planned actions, the reality of the Fort Belvoir natural resources program is that the NRB staff operates within a response environment.

14.3 NATURAL RESOURCE FUNDING

The primary source of funding for the natural resources program is the O&M, Army environmental fund account. The O&M, Army non-environmental fund account provides funding for O&M actions, including routine grounds maintenance, tree planting, landscaping, pest management, stormwater management, facilities maintenance, etc. Alternative funding sources, such as the DoD Legacy Program, provide limited funds for specific resource

conservation projects (e.g., riparian corridor plantings) through a competitive application process. Funds for major construction projects, such as the Potomac Heritage National Scenic Trail, or a new environmental education center, must be obtained through the Military Construction Army program.

The first step in planning for long-term natural resources requirements is done as part of the annual input into the Army's POM process. Natural resource projects are identified for 7 years beyond the current year and budget years. Projects identified during POM are refined through the Army Budget Cycle and the Office of the Secretary of Defense/Office of Management and Budget process. The POM, known locally as the Environmental Program Requirements, must identify the long-term projects from this INRMP.

Figure 14.2 represents natural resources program funding from FY-90 through FY-07. This figure excludes government staff salaries, travel and training. During the period FY-90 through FY-93, there were very few natural resources management actions/projects at Fort Belvoir. Management emphasis was focused mostly on wildlife and endangered species. The period FY-94 through FY-97 was the beginning of planning level surveys to support INRMP development. Surveys undertaken during that time include various wildlife surveys, wetland surveys, and endangered species surveys. Habitat enhancements were mostly limited to forest and wildlife corridor projects.

The period FY-98 through FY-01 was the completion of the INRMP planning level surveys (e.g., aquatic resources, watersheds, etc.). Resource management requirements were identified, and specific management plans (e.g., Bald Eagle Management Plan, Stream Corridor Protection Plan, Grassland Management Plan, Invasive/Exotic Vegetation Management Plan, Refuge Management Plan) were developed during this time. Additional services (e.g., goose hazard management, pest management, environmental education, watershed restoration) were added to the installation's natural resources management program.

During the period FY-02 through FY-07, the natural resources management program plans to continue services provided in previous years (as appropriate) and implement the actions/projects addressed by this INRMP and its supporting sub-plans (e.g., Bald Eagle Management Plan). Such actions include correcting existing stormwater problems, implementing wildlife habitat enhancement and restoration projects and constructing new educational and public access facilities in the refuges.

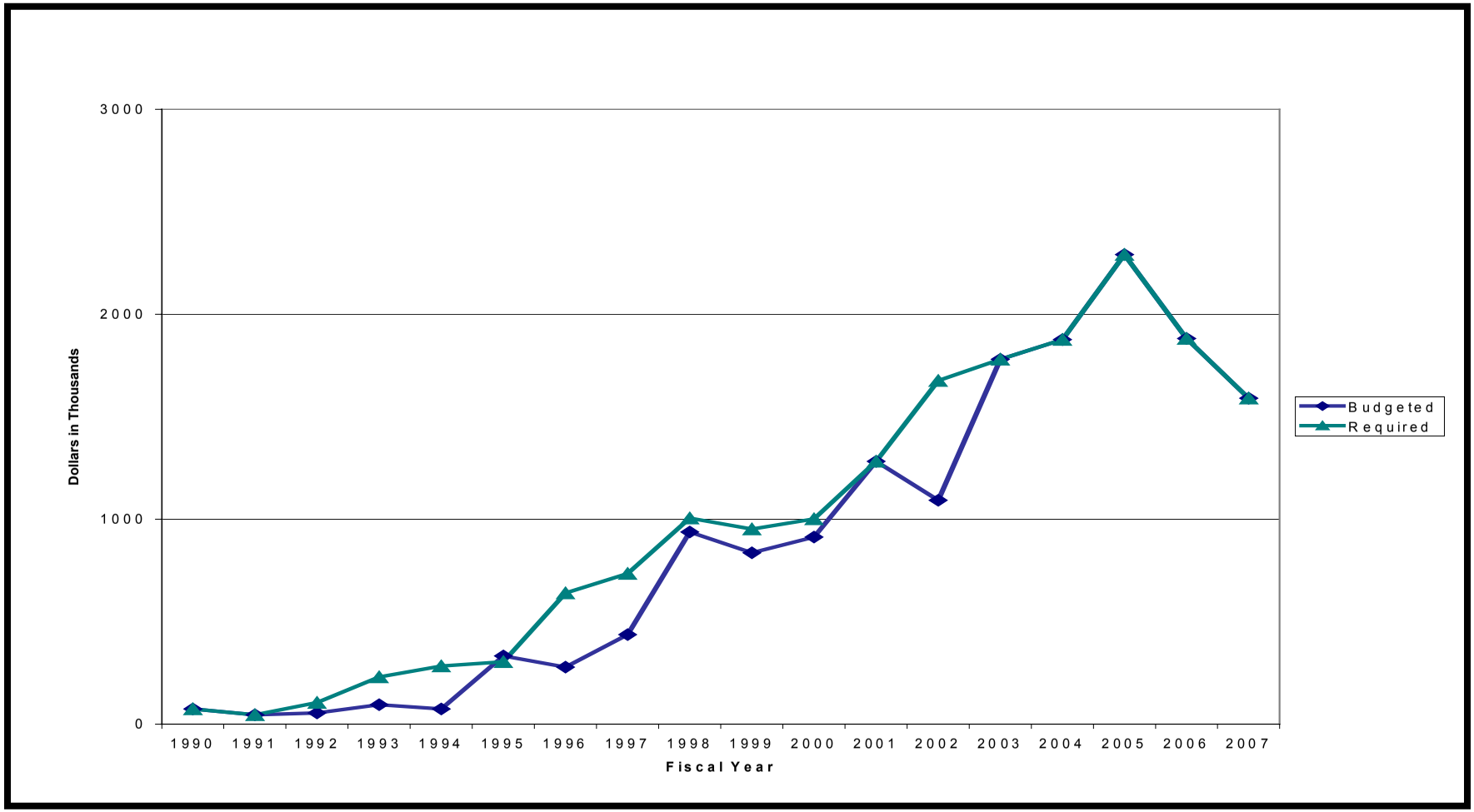


Figure 14.2: Natural Resources Program Funding

Tables 14.3 through 14.9 provide a summary of individual projects listed by fiscal year.

Table 14.3: Water Resources Technical Area Project Summary

FY-01	*FY-02*	*FY-03*	*FY-04*	*FY-05*	*FY-06*
In-stream aquatic monitoring	In-stream aquatic monitoring	In-stream aquatic monitoring	In-stream aquatic monitoring	In-stream aquatic monitoring	In-stream aquatic monitoring
Aquatic system surveillance	Aquatic system surveillance	Aquatic system surveillance	Aquatic system surveillance	Aquatic system surveillance	Aquatic system surveillance
Localized/issue/ project specific water resource studies/ monitoring	Localized/issue/ project specific water resource studies/monitoring	Localized/issue/ project specific water resource studies/ monitoring	Localized/issue/ project specific water resource studies/monitoring	Localized/issue/ project specific water resource studies/ monitoring	Localized/issue/ project specific water resource studies/ monitoring
Watershed monitoring	Watershed monitoring	Watershed monitoring	Watershed monitoring	Watershed monitoring	Watershed monitoring
Replant riparian buffers	Replant riparian buffers	Replant riparian buffers	Replant riparian buffers	Replant riparian buffers	Replant riparian buffers
Continue to correct stormwater related problems	Continue to correct stormwater related problems	Continue to correct stormwater related problems	Continue to correct stormwater related problems	Continue to correct stormwater related problems	Continue to correct stormwater related problems
Continue to make watershed improvements	Continue to make watershed improvements	Continue to make watershed improvements	Continue to make watershed improvements	Continue to make watershed improvements	Continue to make watershed improvements
Water resources training	Water resources training	Water resources training	Water resources training	Water resources training	Water resources training
Provide technical assistance to emergency situations that threaten aquatic resources	Provide technical assistance to emergency situations that threaten aquatic resources	Provide technical assistance to emergency situations that threaten aquatic resources	Provide technical assistance to emergency situations that threaten aquatic resources	Provide technical assistance to emergency situations that threaten aquatic resources	Provide technical assistance to emergency situations that threaten aquatic resources
Continue to maintain GIS datalayers for water resources	Continue to maintain GIS datalayers for water resources	Continue to maintain GIS datalayers for water resources	Continue to maintain GIS datalayers for water resources	Continue to maintain GIS datalayers for water resources	Continue to maintain GIS datalayers for water resources
Continue to enforce violations of water resource regulations	Continue to enforce violations of water resource regulations	Continue to enforce violations of water resource regulations	Continue to enforce violations of water resource regulations	Continue to enforce violations of water resource regulations	Continue to enforce violations of water resource regulations
	Mulligan Pond fish monitoring plan	Fish monitoring Mulligan Pond	Fish monitoring Mulligan Pond	Fish monitoring Mulligan Pond	Fish monitoring Mulligan Pond
Installation wide aquatic inventory					Installation wide aquatic inventory
		Installation wide watershed inventory			
Installation wide flood-plain identification					

Table 14.3: Water Resources Technical Area Project Summary					
FY-01	***FY-02***	***FY-03***	***FY-04***	***FY-05***	***FY-06***
(continued)					
Installation wide RPA identification					
	Complete GIS hydrography datalayer		Complete historic waterways/shoreline delineation and trend analysis		
	Complete analysis of conservation area boundary and buffers				
	Complete riparian buffer area delineation				
		Complete review of Master Plan for water resources protection			
	Complete Tompkins Basin shoreline access design				
			Develop and install shoreline protection signs	Maintain signage	Maintain signage
	Develop a routine drainage-way monitoring & maintenance program	Continue routine maintenance program	Continue routine maintenance program	Continue routine maintenance program	Continue routine maintenance program
			Develop and install educational displays along shoreline	Maintain displays	Maintain displays
Review and revise Environmental Checklist to include water resources protection					
		Develop recommendations to revise Installation Design Guide and Master Plan to incorporate water resources protection			

Table 14.3: Water Resources Technical Area Project Summary					
FY-01	***FY-02***	***FY-03***	***FY-04***	***FY-05***	***FY-06***
(continued)					
	Establish facilities siting/design review committee to ensure consideration of water resources protection	Continue facilities siting/design review committee	Continue facilities siting/design review committee	Continue facilities siting/ design review committee	Continue facilities siting/ design review committee
	Review and revise training regulation to include water resources protection				
	Develop Stormwater Management Policy Letter				
			Develop & implement fish habitat improvements at Mulligan Pond		
		Develop & implement beaver guards on vegetation at Mulligan Pond	Develop & implement beaver guards on vegetation at Mulligan Pond	Develop & implement beaver guards on vegetation at Mulligan Pond	
Initiate coordination with Fairfax County on Stormwater Planning & Stream Protection Programs	Continue coordination with Fairfax County on Stormwater Planning & Stream Protection Programs	Continue coordination with Fairfax County on Stormwater Planning & Stream Protection Programs	Continue coordination with Fairfax County on Stormwater Planning & Stream Protection Programs	Continue coordination with Fairfax County on Stormwater Planning & Stream Protection Programs	Continue coordination with Fairfax County on Stormwater Planning & Stream Protection Programs
		Complete evaluation of opportunities for special needs fishing			
			Develop Watershed Protection Plan		

Table 14.4: Wetland Resources Technical Area Project Summary					
FY-01	***FY-02***	***FY-03***	***FY-04***	***FY-05***	***FY-06***
Wetland Surveillance	Wetland Surveillance	Wetland Surveillance	Wetland Surveillance	Wetland Surveillance	Wetland Surveillance
Localized/issue/ project specific wetland studies/ monitoring	Localized/issue/ project specific wetland studies/ monitoring	Localized/issue/ project specific wetland studies/ monitoring	Localized/issue/ project specific wetland studies/ monitoring	Localized/issue/ project specific wetland studies/ monitoring	Localized/issue/ project specific wetland studies/ monitoring
Control wildlife impacts to wetlands	Control wildlife impacts to wetlands	Control wildlife impacts to wetlands	Control wildlife impacts to wetlands	Control wildlife impacts to wetlands	Control wildlife impacts to wetlands
Provide technical assistance to emergency situations that threaten wetlands	Provide technical assistance to emergency situations that threaten wetlands	Provide technical assistance to emergency situations that threaten wetlands	Provide technical assistance to emergency situations that threaten wetlands	Provide technical assistance to emergency situations that threaten wetlands	Provide technical assistance to emergency situations that threaten wetlands
Continue to maintain GIS wetland datalayer	Continue to maintain GIS wetland datalayer	Continue to maintain GIS wetland datalayer	Continue to maintain GIS wetland datalayer	Continue to maintain GIS wetland datalayer	Continue to maintain GIS wetland datalayer
Continue to investigate/ enforce violations of wetland regulations	Continue to investigate/ enforce violations of wetland regulations	Continue to investigate/ enforce violations of wetland regulations	Continue to investigate/ enforce violations of wetland regulations	Continue to investigate/ enforce violations of wetland regulations	Continue to investigate/ enforce violations of wetland regulations
Develop wetland protection policy letter	Continue to issue wetland protection policy letter	Continue to issue wetland protection policy letter	Continue to issue wetland protection policy letter	Continue to issue wetland protection policy letter	Continue to issue wetland protection policy letter
		Complete Installation Wide Inventory			
	Develop & implement monitoring program for high-rarity wetlands	Continue monitoring program for high-rarity wetlands	Continue monitoring program for high-rarity wetlands	Continue monitoring program for high-rarity wetlands	Continue monitoring program for high-rarity wetlands
	Perform historic wetlands identification & trend analysis				
			Identify opportunities for wetland creation & enhancement	Identify opportunities for wetland creation & enhancement	
	Review & revise Installation Design Guide concerning wetland protection				

Table 14.4: Wetland Resources Technical Area Project Summary					
FY-01	***FY-02***	***FY-03***	***FY-04***	***FY-05***	***FY-06***
(continued)					
Review/revise Environmental Checklist to include wetland protection					
	Establish facilities siting/design review committee to ensure consideration of wetland protection	Continue coordination of facilities siting/ design review committee to ensure consideration of wetland protection	Continue coordination of facilities siting/ design review committee to ensure consideration of wetland protection	Continue coordination of facilities siting/ design review committee to ensure consideration of wetland protection	Continue coordination of facilities siting/ design review committee to ensure consideration of wetland protection
	Review/revise training regulation to include wetland protection				
99th Reserve Wetland Mitigation	99th Reserve Wetland Mitigation				

Table 14.5: Undeveloped Areas Vegetation Technical Area Project Summary					
FY-01	***FY-02***	***FY-03***	***FY-04***	***FY-05***	***FY-06***
Continue to perform floristic surveys	Continue to perform floristic surveys	Continue to perform floristic surveys	Continue to perform floristic surveys	Continue to perform floristic surveys	Continue to perform floristic surveys
Perform vegetation surveillance	Perform vegetation surveillance	Perform vegetation surveillance	Perform vegetation surveillance	Perform vegetation surveillance	Perform vegetation surveillance
Perform localized/issue-specific studies	Perform localized/issue-specific studies	Perform localized/issue-specific studies	Perform localized/issue-specific studies	Perform localized/issue-specific studies	Perform localized/issue-specific studies
Continue to develop & implement invasive/exotic vegetation controls	Continue to develop & implement invasive/exotic vegetation controls	Continue to develop & implement invasive/exotic vegetation controls	Continue to develop & implement invasive/exotic vegetation controls	Continue to develop & implement invasive/exotic vegetation controls	Continue to develop & implement invasive/exotic vegetation controls
Continue to implement watershed conservation/ restoration actions	Continue to implement watershed conservation/ restoration actions	Continue to implement watershed conservation/ restoration actions	Continue to implement watershed conservation/ restoration actions	Continue to implement watershed conservation/ restoration actions	Continue to implement watershed conservation/ restoration actions
Implement Integrated Pest Management	Implement Integrated Pest Management	Implement Integrated Pest Management	Implement Integrated Pest Management	Implement Integrated Pest Management	Implement Integrated Pest Management
Perform timber stand improvement	Perform timber stand improvement	Perform timber stand improvement	Perform timber stand improvement	Perform timber stand improvement	Perform timber stand improvement
Continue to issue Tree Protection Policy Letter	Continue to issue Tree Protection Policy Letter	Continue to issue Tree Protection Policy Letter	Continue to issue Tree Protection Policy Letter	Continue to issue Tree Protection Policy Letter	Continue to issue Tree Protection Policy Letter
Continue to provide technical assistance to emergency situations that threaten vegetation	Continue to provide technical assistance to emergency situations that threaten vegetation	Continue to provide technical assistance to emergency situations that threaten vegetation	Continue to provide technical assistance to emergency situations that threaten vegetation	Continue to provide technical assistance to emergency situations that threaten vegetation	Continue to provide technical assistance to emergency situations that threaten vegetation
Continue to maintain GIS vegetation datalayers	Continue to maintain GIS vegetation datalayers	Continue to maintain GIS vegetation datalayers	Continue to maintain GIS vegetation datalayers	Continue to maintain GIS vegetation datalayers	Continue to maintain GIS vegetation datalayers
Continue to investigate/ enforce violations of vegetation regulations	Continue to investigate/ enforce violations of vegetation regulations	Continue to investigate/ enforce violations of vegetation regulations	Continue to investigate/enforce violations of vegetation regulations	Continue to investigate/ enforce violations of vegetation regulations	Continue to investigate/ enforce violations of vegetation regulations

Table 14.5: Undeveloped Areas Vegetation Technical Area Project Summary					
FY-01	***FY-02***	***FY-03***	***FY-04***	***FY-05***	***FY-06***
(continued)					
	Develop and implement program to monitor high-rarity ranked plant communities	Continue monitoring high-rarity ranked plant communities	Continue monitoring high-rarity ranked plant communities	Continue monitoring high-rarity ranked plant communities	Continue monitoring high-rarity ranked plant communities
			Establish/participate in regional effort for invasive/exotic vegetation control	Continue coordination of regional effort for invasive/ exotic vegetation control	Continue coordination of regional effort for invasive/exotic vegetation control
Review/provide recommend-ations for Fire Department SOP for wildlife management					
Review/revise Environmental Checklist to include vegetation protection					
	Review/revise Installation Design Guide to include vegetation protection (BMPs, LID) & eliminate invasive/exotic plants				
	Establish facilities siting/design review committee to ensure consideration of vegetation protection	Continue facilities siting/design review committee to ensure consideration of vegetation protection	Continue facilities siting/design review committee to ensure consideration of vegetation protection	Continue facilities siting/ design review committee to ensure consideration of vegetation protection	Continue facilities siting/design review committee to ensure consideration of vegetation protection

Table 14.5: Undeveloped Areas Vegetation Technical Area Project Summary					
FY-01	***FY-02***	***FY-03***	***FY-04***	***FY-05***	***FY-06***
	Review/revise Training Regulation to include vegetation protection				
		Develop Invasive/Exotic Plant Management Plan			
		Complete vascular plant survey			

Table 14.6: Developed Areas Vegetation Technical Area Project Summary					
FY-01	***FY-02***	***FY-03***	***FY-04***	***FY-05***	***FY-06***
Continue to develop & implement grounds maintenance practices/ standards to reduce need/ dependency on pesticides	Continue to develop & implement grounds maintenance practices/ standards to reduce need/ dependency on pesticides	Continue to develop & implement grounds maintenance practices & standards to reduce need/ dependency on pesticides	Continue to develop & implement grounds maintenance practices/standards to reduce need/ dependency on pesticides	Continue to develop & implement grounds maintenance practices/ standards to reduce need/ dependency on pesticides	Continue to develop & implement grounds maintenance practices/ standards to reduce need/ dependency on pesticides
Continue to perform vegetation surveys	Continue to perform vegetation surveys	Continue to perform vegetation surveys	Continue to perform vegetation surveys	Continue to perform vegetation surveys	Continue to perform vegetation surveys
Perform vegetation surveillance	Perform vegetation surveillance	Perform vegetation surveillance	Perform vegetation surveillance	Perform vegetation surveillance	Perform vegetation surveillance
Continue to issue Integrated Pest Management Policy Letter	Continue to issue Integrated Pest Management Policy Letter	Continue to issue Integrated Pest Management Policy Letter	Continue to issue Integrated Pest Management Policy Letter	Continue to issue Integrated Pest Management Policy Letter	Continue to issue Integrated Pest Management Policy Letter
Continue to develop/ implement turf management standards	Continue to develop/implement turf management standards	Continue to develop/ implement turf management standards	Continue to develop/implement turf management standards	Continue to develop/ implement turf management standards	Continue to develop/ implement turf management standards
Continue to develop/ implement urban forestry	Continue to develop/ implement urban forestry	Continue to develop/ implement urban forestry	Continue to develop/ implement urban forestry	Continue to develop/ implement urban forestry	Continue to develop/ implement urban forestry
Implement conservation landscaping	Implement conservation landscaping	Implement conservation landscaping	Implement conservation landscaping	Implement conservation landscaping	Implement conservation landscaping
Continue to maintain GIS vegetation datalayers	Continue to maintain GIS vegetation datalayers	Continue to maintain GIS vegetation datalayers	Continue to maintain GIS vegetation datalayers	Continue to maintain GIS vegetation datalayers	Continue to maintain GIS vegetation datalayers
Continue to investigate/ enforce violations of vegetation regulations	Continue to investigate/ enforce violations of vegetation regulations	Continue to investigate/ enforce violations of vegetation regulations	Continue to investigate/enforce violations of vegetation regulations	Continue to investigate/ enforce violations of vegetation regulations	Continue to investigate/ enforce violations of vegetation regulations
	Perform site reclamation/ restoration to native landscaping	Perform site reclamation/ restoration to native landscaping			

Table 14.6: Developed Areas Vegetation Technical Area Project Summary					
FY-01	***FY-02***	***FY-03***	***FY-04***	***FY-05***	***FY-06***
(continued)					
			Establish/participate in regional effort for invasive/exotic vegetation control	Establish/ participate in regional effort for invasive/ exotic vegetation control	Establish/ participate in regional effort for invasive/exotic vegetation control
Review/provide recommendations for Fire Department SOP for wildfire management					
Review/revise Environmental Checklist to include vegetation protection					
			Develop/construct a demonstration/ education conservation landscape display	Continue to maintain demonstation/ education conservation landscape display	Continue to maintain demonstration/ education conservation landscape display
			Develop/maintain self-help brochures & training programs	Maintain self-help brochures & training programs	Maintain self-help brochures & training programs
	Review/revise Installation Design Guide to include vegetation protection (BMPs, LID), eliminate invasive/exotic plants and implement planting of shade trees with new construction				
	Establish facilities siting/design review committee to ensure consideration of vegetation protection	Continue facilities siting/design review committee to ensure consideration of vegetation protection	Continue facilities siting/design review committee to ensure consideration of vegetation protection	Continue facilities siting/ design review committee to ensure consideration of vegetation protection	Continue facilities siting/design review committee to ensure consideration of vegetation protection

Table 14.6: Developed Areas Vegetation Technical Area Project Summary					
FY-01	***FY-02***	***FY-03***	***FY-04***	***FY-05***	***FY-06***
(continued)					
	Review/revise Training Regulation to include vegetation protection				
Develop Historic Tree Management Plan	Develop Historic Tree Management Plan				
			Develop Urban Tree Management Plan		

Table 14.7: Wildlife Management Technical Area Project Summary					
FY-01	***FY-02***	***FY-03***	***FY-04***	***FY-05***	***FY-06***
Perform wildlife/habitat surveillance	Perform wildlife/habitat surveillance	Perform wildlife/habitat surveillance	Perform wildlife/habitat surveillance	Perform wildlife/habitat surveillance	Perform wildlife/habitat surveillance
Perform localized/issue specific studies	Perform localized/issue specific studies	Perform localized/issue specific studies	Perform localized/issue specific studies	Perform localized/issue specific studies	Perform localized/issue specific studies
Complete/ maintain Wildlife Information Management System	Complete/maintain Wildlife Information Management System	Complete/ maintain Wildlife Information Management System	Complete/maintain Wildlife Information Management System	Complete/ maintain Wildlife Information Management System	Complete/ maintain Wildlife Information Management System
Continue to control invasive/exotic species	Continue to control invasive/exotic species	Continue to control invasive/exotic species	Continue to control invasive/exotic species	Continue to control invasive/exotic species	Continue to control invasive/exotic species
Continue to monitor/control wildlife that impact habitat	Continue to monitor/control wildlife that impact habitat	Continue to monitor/control wildlife that impact habitat	Continue to monitor/control wildlife that impact habitat	Continue to monitor/control wildlife that impact habitat	Continue to monitor/control wildlife that impact habitat
Continue to re-seed using native mixes	Continue to re-seed using native mixes	Continue to re-seed using native mixes	Continue to re-seed using native mixes	Continue to re-seed using native mixes	Continue to re-seed using native mixes
Continue to manage pesticide use IAW IPMP	Continue to manage pesticide use IAW IPMP	Continue to manage pesticide use IAW IPMP	Continue to manage pesticide use IAW IPMP	Continue to manage pesticide use IAW IPMP	Continue to manage pesticide use IAW IPMP
Continue to reduce mowing/grounds maintenance	Continue to reduce mowing/grounds maintenance	Continue to reduce mowing/grounds maintenance	Continue to reduce mowing/grounds maintenance	Continue to reduce mowing/grounds maintenance	Continue to reduce mowing/grounds maintenance
Continue to remove abandoned impervious surfaces and replant	Continue to remove abandoned impervious surfaces and replant	Continue to remove abandoned impervious surfaces and replant	Continue to remove abandoned impervious surfaces and replant	Continue to remove abandoned impervious surfaces and replant	Continue to remove abandoned impervious surfaces and replant
Continue to enhance corridor vegetation	Continue to enhance corridor vegetation	Continue to enhance corridor vegetation	Continue to enhance corridor vegetation	Continue to enhance corridor vegetation	Continue to enhance corridor vegetation
Continue to enhance riparian vegetation	Continue to enhance riparian vegetation	Continue to enhance riparian vegetation	Continue to enhance riparian vegetation	Continue to enhance riparian vegetation	Continue to enhance riparian vegetation

Table 14.7: Wildlife Management Technical Area Project Summary					
FY-01	***FY-02***	***FY-03***	***FY-04***	***FY-05***	***FY-06***
(continued)					
Continue to implement maintenance/ corrective actions to wildlife crossing structures	Continue to implement maintenance/ corrective actions to wildlife crossing structures	Continue to implement maintenance/ corrective actions to wildlife crossing structures	Continue to implement maintenance/ corrective actions to wildlife crossing structures	Continue to implement maintenance/ corrective actions to wildlife crossing structures	Continue to implement maintenance/ corrective actions to wildlife crossing structures
Evaluate & correct wildlife hazards	Evaluate & correct wildlife hazards	Evaluate & correct wildlife hazards	Evaluate & correct wildlife hazards	Evaluate & correct wildlife hazards	Evaluate & correct wildlife hazards
Continue to provide technical assistance in emergency situations that threaten wildlife	Continue to provide technical assistance in emergency situations that threaten wildlife	Continue to provide technical assistance in emergency situations that threaten wildlife	Continue to provide technical assistance in emergency situations that threaten wildlife	Continue to provide technical assistance in emergency situations that threaten wildlife	Continue to provide technical assistance in emergency situations that threaten wildlife
Continue to participate in the Fort Belvoir deer hunting program	Continue to participate in the Fort Belvoir deer hunting program	Continue to participate in the Fort Belvoir deer hunting program	Continue to participate in the Fort Belvoir deer hunting program	Continue to participate in the Fort Belvoir deer hunting program	Continue to participate in the Fort Belvoir deer hunting program
Continue to participate in VDGIF's Deer Population Control Program & Damage Control Assistance Program	Continue to participate in VDGIF's Deer Population Control Program & Damage Control Assistance Program	Continue to participate in VDGIF's Deer Population Control Program & Damage Control Assistance Program	Continue to participate in VDGIF's Deer Population Control Program & Damage Control Assistance Program	Continue to participate in VDGIF's Deer Population Control Program & Damage Control Assistance Program	Continue to participate in VDGIF's Deer Population Control Program & Damage Control Assistance Program
Continue to implement goose hazard management program at DAAF	Continue to implement goose hazard management program at DAAF	Continue to implement goose hazard management program at DAAF	Continue to implement goose hazard management program at DAAF	Continue to implement goose hazard management program at DAAF	Continue to implement goose hazard management program at DAAF
Continue to implement Installation Wide feral cat program	Continue to implement Installation Wide feral cat program	Continue to implement Installation Wide feral cat program	Continue to implement Installation Wide feral cat program	Continue to implement Installation Wide feral cat program	Continue to implement Installation Wide feral cat program
Continue to participate in Fairfax County's raccoon rabies control program	Continue to participate in Fairfax County's raccoon rabies control program	Continue to participate in Fairfax County's raccoon rabies control program	Continue to participate in Fairfax County's raccoon rabies control program	Continue to participate in Fairfax County's raccoon rabies control program	Continue to participate in Fairfax County's raccoon rabies control program
Continue to participate in Fairfax County's West Nile Virus management program	Continue to participate in Fairfax County's West Nile Virus management program	Continue to participate in Fairfax County's West Nile Virus management program	Continue to participate in Fairfax County's West Nile Virus management program	Continue to participate in Fairfax County's West Nile Virus management program	Continue to participate in Fairfax County's West Nile Virus management program

Table 14.7: Wildlife Management Technical Area Project Summary					
FY-01	***FY-02***	***FY-03***	***FY-04***	***FY-05***	***FY-06***
(continued)					
Continue to review/respond to tenant & AFH requirements for wildlife management	Continue to review/respond to tenant & AFH requirements for wildlife management	Continue to review/respond to tenant & AFH requirements for wildlife management	Continue to review/respond to tenant & AFH requirements for wildlife management	Continue to review/respond to tenant & AFH requirements for wildlife management	Continue to review/respond to tenant & AFH requirements for wildlife management
Continue to maintain GIS wildlife datalayer	Continue to maintain GIS wildlife datalayer	Continue to maintain GIS wildlife datalayer	Continue to maintain GIS wildlife datalayer	Continue to maintain GIS wildlife datalayer	Continue to maintain GIS wildlife datalayer
Continue to investigate/ enforce violations of wildlife regulations	Continue to investigate/ enforce violations of wildlife regulations	Continue to investigate/ enforce violations of wildlife regulations	Continue to investigate/enforce violations of wildlife regulations	Continue to investigate/ enforce violations of wildlife regulations	Continue to investigate/ enforce violations of wildlife regulations
Review/revise Environmental Checklist to include wildlife protection					
Develop/ implement turkey surveys & harvest data	Implement turkey surveys & harvest data	Implement turkey surveys & harvest data	Implement turkey surveys & harvest data	Implement turkey surveys & harvest data	Implement turkey surveys & harvest data
Complete baseline wildlife surveys					
	Develop a wildlife management plan				
			Perform wildlife studies/ monitoring IAW wildlife management plan		
	Evaluate effectiveness of the nest box program				
		Implement grassland & early habitat enhancement projects IAW PIF priority bird species	Implement grassland & early habitat enhancement projects IAW PIF priority bird species	Implement grassland & early habitat enhancement projects IAW PIF priority bird species	
	Evaluate opportunities to provide hunting access to persons with disabilities	Evaluate opportunities to provide hunting access to persons with disabilities			

Table 14.7: Wildlife Management Technical Area Project Summary					
FY-01	***FY-02***	***FY-03***	***FY-04***	***FY-05***	***FY-06***
	Review/revise Installation Design Guide to include wildlife issues				
	Establish a facilities siting/design review committee to ensure consideration of wildlife issues	Continue facilities siting/design review committee to ensure consideration of wildlife issues	Continue facilities siting/design review committee to ensure consideration of wildlife issues	Continue facilities siting/ design review committee to ensure consideration of wildlife issues	Continue facilities siting/design review committee to ensure consideration of wildlife issues
	Review/revise training regulation to include wildlife protection				
		Develop a classification of undeveloped areas according to their suitability for development/ value as wildlife habitat			
			Establish/participate in a regional effort for wildlife management committee	Continue participation in regional effort for wildlife management	Continue participation in regional effort for wildlife management
			Investigate participation in regional/national level wildlife conservation programs	Continue participation in regional/national level wildlife conservation programs	Continue participation in regional/national level wildlife conservation programs
		Develop Forest and Wildlife Corridor Management Plan			

Table 14.8: Endangered, Threatened and Rare Species Management Technical Area Project Summary					
FY-01	***FY-02***	***FY-03***	***FY-04***	***FY-05***	***FY-06***
Continue to monitor species listings	Continue to monitor species listings	Continue to monitor species listings	Continue to monitor species listings	Continue to monitor species listings	Continue to monitor species listings
Continue to perform annual bald eagle monitoring	Continue to perform annual bald eagle monitoring	Continue to perform annual bald eagle monitoring	Continue to perform annual bald eagle monitoring	Continue to perform annual bald eagle monitoring	Continue to perform annual bald eagle monitoring
Perform bald eagle surveillance	Perform bald eagle surveillance	Perform bald eagle surveillance	Perform bald eagle surveillance	Perform bald eagle surveillance	Perform bald eagle surveillance
Perform localized/issue specific studies	Perform localized/issue specific studies	Perform localized/issue specific studies	Perform localized/issue specific studies	Perform localized/issue specific studies	Perform localized/issue specific studies
Continue to enhance bald eagle habitat	Continue to enhance bald eagle habitat	Continue to enhance bald eagle habitat	Continue to enhance bald eagle habitat	Continue to enhance bald eagle habitat	Continue to enhance bald eagle habitat
Continue to control risk of wildlife impacts to rare plant & animal species habitats and rare ecological communities	Continue to control risk of wildlife impacts to rare plant & animal species habitats and rare ecological communities	Continue to control risk of wildlife impacts to rare plant & animal species habitats and rare ecological communities	Continue to control risk of wildlife impacts to rare plant & animal species habitats and rare ecological communities	Continue to control risk of wildlife impacts to rare plant & animal species habitats and rare ecological communities	Continue to control risk of wildlife impacts to rare plant & animal species habitats and rare ecological communities
Continue to support Mason Neck Bald Eagle Survey Program	Continue to support Mason Neck Bald Eagle Survey Program	Continue to support Mason Neck Bald Eagle Survey Program	Continue to support Mason Neck Bald Eagle Survey Program	Continue to support Mason Neck Bald Eagle Survey Program	Continue to support Mason Neck Bald Eagle Survey Program
Continue to support annual VDGIF bald eagle survey	Continue to support annual VDGIF bald eagle survey	Continue to support annual VDGIF bald eagle survey	Continue to support annual VDGIF bald eagle survey	Continue to support annual VDGIF bald eagle survey	Continue to support annual VDGIF bald eagle survey
Continue to provide technical assistance in emergency situations that threaten listed/ rare species	Continue to provide technical assistance in emergency situations that threaten listed/rare species	Continue to provide technical assistance in emergency situations that threaten listed/rare species	Continue to provide technical assistance in emergency situations that threaten listed/rare species	Continue to provide technical assistance in emergency situations that threaten listed/ rare species	Continue to provide technical assistance in emergency situations that threaten listed/ rare species
Continue to investigate/ enforce violations of ETRS regulations	Continue to investigate/ enforce violations of ETRS regulations	Continue to investigate/ enforce violations of ETRS regulations	Continue to investigate/enforce violations of ETRS regulations	Continue to investigate/ enforce violations of ETRS regulations	Continue to investigate/ enforce violations of ETRS regulations
Continue to maintain GIS ETRS datalayer	Continue to maintain GIS ETRS datalayer	Continue to maintain GIS ETRS datalayer	Continue to maintain GIS ETRS datalayer	Continue to maintain GIS ETRS datalayer	Continue to maintain GIS ETRS datalayer

Table 14.8: Endangered, Threatened and Rare Species Management Technical Area Project Summary					
FY-01	***FY-02***	***FY-03***	***FY-04***	***FY-05***	***FY-06***
(continued)					
	Complete Installation Wide T&E Inventory				
	Develop/ implement baseline wood turtle survey				
		Develop/ implement rare species/ communities monitoring program	Develop/implement rare species/ communities monitoring program	Develop/ implement rare species/ communities monitoring program	
Develop/ implement eagle awareness program					
				Revise Bald Eagle Management Plan	
	Develop Wood Turtle Management Plan				
Review/revise Environmental Checklist to include ETRS protection					
	Initiate eagle protection cooperative agreement with Pohick Regional Park	Continue eagle protection cooperative agreement with Pohick Regional Park	Continue eagle protection cooperative agreement with Pohick Regional Park	Continue eagle protection cooperative agreement with Pohick Regional Park	Continue eagle protection cooperative agreement with Pohick Regional Park
	Initiate wood turtle protection cooperative agreement with Huntley Meadows	Continue wood turtle protection cooperative agreement with Huntley Meadows	Continue wood turtle protection cooperative agreement with Huntley Meadows	Continue wood turtle protection cooperative agreement with Huntley Meadows	Continue wood turtle protection cooperative agreement with Huntley Meadows

Table 14.8: Endangered, Threatened and Rare Species Management Technical Area Project Summary					
FY-01	***FY-02***	***FY-03***	***FY-04***	***FY-05***	***FY-06***
(continued)					
	Establish a facilities siting/ design review committee to ensure consideration of threatened, endangered and rare species/ communities protection	Continue a facilities siting/ design review committee to ensure consideration of threatened, endangered and rare species/ communities protection	Continue a facilities siting/design review committee to ensure consideration of threatened, endangered and rare species/ communities protection	Continue a facilities siting/ design review committee to ensure consideration of threatened, endangered and rare species/ communities protection	Continue a facilities siting/ design review committee to ensure consideration of threatened, endangered and rare species/ communities protection
	Review/revise training regulation to include threatened, endangered and rare species/ communities protection				
	Review/revise Installation Design Guide to ensure consideration of ETRS				

Table 14.9: Special Natural Areas Management Technical Area Project Summary					
FY-01	***FY-02***	***FY-03***	***FY-04***	***FY-05***	***FY-06***
Continue to perform refuge/ corridor biological surveys in conjunction with installation wide surveys	Continue to perform refuge/ corridor biological surveys in conjunction with installation wide surveys	Continue to perform refuge/ corridor biological surveys in conjunction with installation wide surveys	Continue to perform refuge/ corridor biological surveys in conjunction with installation wide surveys	Continue to perform refuge/ corridor biological surveys in conjunction with installation wide surveys	Continue to perform refuge/ corridor biological surveys in conjunction with installation wide surveys
Continue to conduct user surveys of refuge facilities	Continue to conduct user surveys of refuge facilities	Continue to conduct user surveys of refuge facilities	Continue to conduct user surveys of refuge facilities	Continue to conduct user surveys of refuge facilities	Continue to conduct user surveys of refuge facilities
Continue to conduct wildlife movement surveys in corridor	Continue to conduct wildlife movement surveys in corridor	Continue to conduct wildlife movement surveys in corridor	Continue to conduct wildlife movement surveys in corridor	Continue to conduct wildlife movement surveys in corridor	Continue to conduct wildlife movement surveys in corridor
Continue to perform refuge/ corridor surveillance	Continue to perform refuge/ corridor surveillance	Continue to perform refuge/ corridor surveillance	Continue to perform refuge/ corridor surveillance	Continue to perform refuge/ corridor surveillance	Continue to perform refuge/ corridor surveillance
Develop Refuge Use/Fact Sheet	Implement Refuge Use/Corridor Access requests	Implement Refuge Use/Corridor Access requests	Implement Refuge Use/Corridor Access requests	Implement Refuge Use/ Corridor Access requests	Implement Refuge Use/ Corridor Access requests
Develop and implement environmental education materials/ programs in conjunction with the Environmental Education Center	Develop and implement environmental education materials/ programs in conjunction with the Environmental Education Center	Develop and implement environmental education materials/ programs in conjunction with the Environmental Education Center	Develop and implement environmental education materials/ programs in conjunction with the Environmental Education Center	Develop and implement environmental education materials/ programs in conjunction with the Environmental Education Center	Develop and implement environmental education materials/ programs in conjunction with the Environmental Education Center
Continue to participate in the Partners in Education Program	Continue to participate in the Partners in Education Program	Continue to participate in the Partners in Education Program	Continue to participate in the Partners in Education Program	Continue to participate in the Partners in Education Program	Continue to participate in the Partners in Education Program
Continue to conduct education events in association with the refuges	Continue to conduct education events in association with the refuges	Continue to conduct education events in association with the refuges	Continue to conduct education events in association with the refuges	Continue to conduct education events in association with the refuges	Continue to conduct education events in association with the refuges

Table 14.9: Special Natural Areas Management Technical Area Project Summary					
FY-01	***FY-02***	***FY-03***	***FY-04***	***FY-05***	***FY-06***
(continued)					
Develop and maintain interpretive displays in refuge and education center	Develop and maintain interpretive displays in refuge and education center	Develop and maintain interpretive displays in refuge and education center	Develop and maintain interpretive displays in refuge and education center	Develop and maintain interpretive displays in refuge and education center	Develop and maintain interpretive displays in refuge and education center
Continue to implement routine maintenance of refuge trails and facilities	Continue to implement routine maintenance of refuge trails and facilities	Continue to implement routine maintenance of refuge trails and facilities	Continue to implement routine maintenance of refuge trails and facilities	Continue to implement routine maintenance of refuge trails and facilities	Continue to implement routine maintenance of refuge trails and facilities
	Review/revise/staff Special Natural Areas boundary expansion				
Establish/manage Qualified Volunteer Program for the refuges	Continue to manage Qualified Volunteer Program for refuges	Continue to manage Qualified Volunteer Program for refuges	Continue to manage Qualified Volunteer Program for refuges	Continue to manage Qualified Volunteer Program for refuges	Continue to manage Qualified Volunteer Program for refuges
	Design ABWR Visitor Center	Complete ABWR Visitor Center Exhibit Design			
			Develop Refuge Management Plan		
				ABWR Visitor Center Construction	ABWR Visitor Center Exhibit Construction